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ARCHITECTVRE *

Published by Charles Scribner's Sons

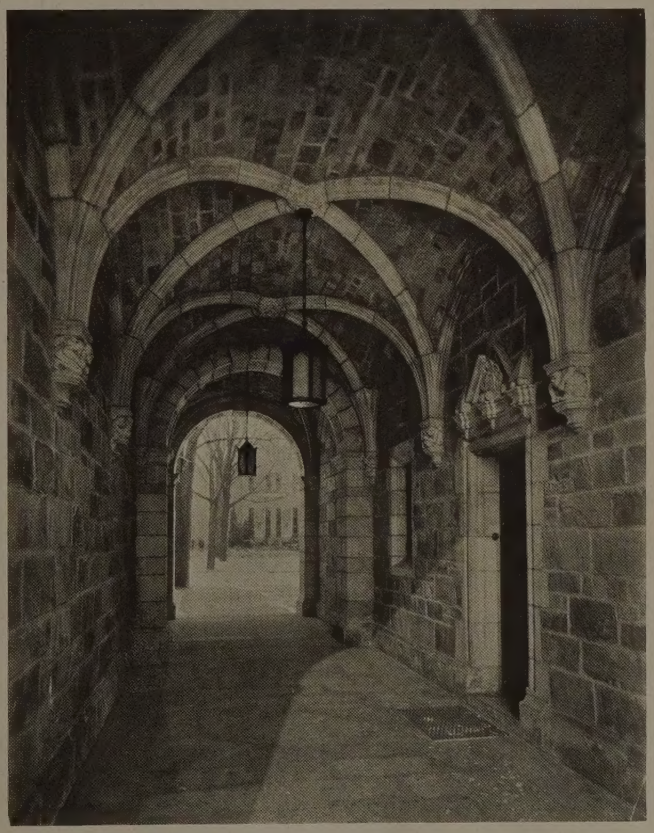
THE PROFESSIONAL ARCHITECTVRAL MONTHLY

VOL. LII JULY, 1925 NO. 1

The Law Courts Building, University of Michigan

By Wells Bennett

DURING the last few years the University of Michigan has, in addition to a great State building programme, received from a private donor two especially fine buildings. The Martha Cook Dormitory, an unusually beautiful and complete dormitory for women, and its recent complement in the Law Courts or Lawyers Club building constitute in buildings and endowment the largest gifts ever received by any State university from a single person. Both these buildings were the gift of Mr. William Wilson Cook, now a leading member of the New York bar and a resident of Rye, New York. Mr. Cook is a native of Michigan, an alumnus of the university, and it is the good fortune of his alma mater that he turned to her when his wealth and affection prompted his magnificent gifts. Something of the idealism of the man shows in the fact that although he has followed every detail of their construction, and watched their progress with the greatest interest, he has never seen either Martha Cook Dormitory or the Law Courts. The reason given is that there exists in his mind an ideal picture of the buildings which he has fathered. With this he is quite content and prefers not to see the executed buildings lest in some way they should fall short of his ideal.



Entrance through East tower.

At present but one unit of the Law Courts is completed as shown in the accompanying illustrations. The area to be occupied by this group comprises about two city blocks which will contain two residence halls in addition to the present unit, a law school building, and a library to house the fine university law library. In developing his dream Mr. Cook turned to York and Sawyer, the architects of his earlier gift, the Martha Cook Dormitory. For women, this was appropriately lighter in feeling, of brick with stone trimmings. The Lawyers Club is equally masculine, strong and simple in scale, of seam-faced granite in varied colors trimmed with Indiana limestone. The present group consists of a club building for students and guests, a dining-hall for about 300, a fully equipped kitchen building, and a dormitory accommodating a total of 163 students.

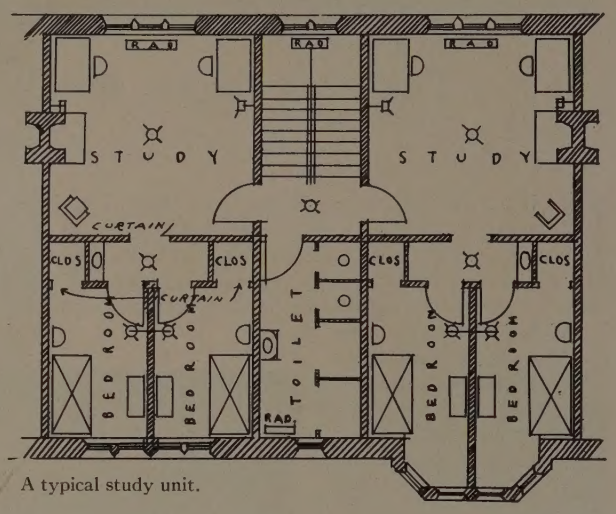
The dining-hall, 34 by 138 feet and 50 feet high, admirably carries out the English college hall tradition. The exterior stone is beautifully textured. Inside, the high oak wainscot with hand-cut mouldings and carved doorways give the scale. Above the walls of dressed stone and the great windows the roof is carried by oak trusses, trusses from whose corbels the carven heads of great jurists gaze placidly down on the oaken tables and seats, on the patterned stone floor. The club building linked with the great hall contains the entrance hall and offices, and the lounge. This wing is designed in the more domestic and playful style of the later English transitional period, and here one finds the inconsequential but none the less delightful details of that time. The chief feature of this building is the lounge on the first floor, 34 by 84 feet. A high carved oak mantel and fine panelling contrast with a very successful moulded plaster ceiling. Here again, even to the floor and furnishings, all is strictly in period but without loss of the domestic note.

As part of a new scheme for teaching law, living quarters are provided for visiting club members to the number

Mantel in club room.

of eight. In addition to the private rooms each with its bath, an oak-panelled writing-room and library are also provided. All this portion is in the second story above the lounge. The dormitories for students are laid out in a unit system, each with separate stair and a variety of rooms for thirteen students. All rooms in the dormitories have rough plaster finish and cement floors, the walls of the stairs and halls are of old gold Roman brick, the floors of Welsh tile and the trim of chestnut. If in this dormitory wing the modern living facilities give the lie to the traditional forms outside, it is so slight and so gracefully done that one feels no jar, no loss of atmosphere.

In this structure whose form is so true to a fine tradition it is gratifying to know that in its erection there were none of the hasty methods and veneer-on-frame construction found in too many pretentious buildings. The walls are of solid masonry and the groined vaults are genuine; the oak is specially selected, the glass and beautifully worked leadwork imported. Touches of craftsmanship are everywhere. To watch the erection of this building in the honest manner befitting its style has been most refreshing.



A typical study unit.

In a telegram to the University Law Club upon the opening of the new building, Mr. Cook said:

"Your building is of little consequence except: First, to elevate the standard of the law school and of the legal profession, and secondly, to help simplify and clarify the law by reason of your large income."

The donor and his architects have fittingly housed the University College of Law. The law, though based on tradition, has also been a steady development. It is a charming fancy that brings out in the stretch of this building the English development through mediæval times to the Renaissance.

A typical student's living-room.

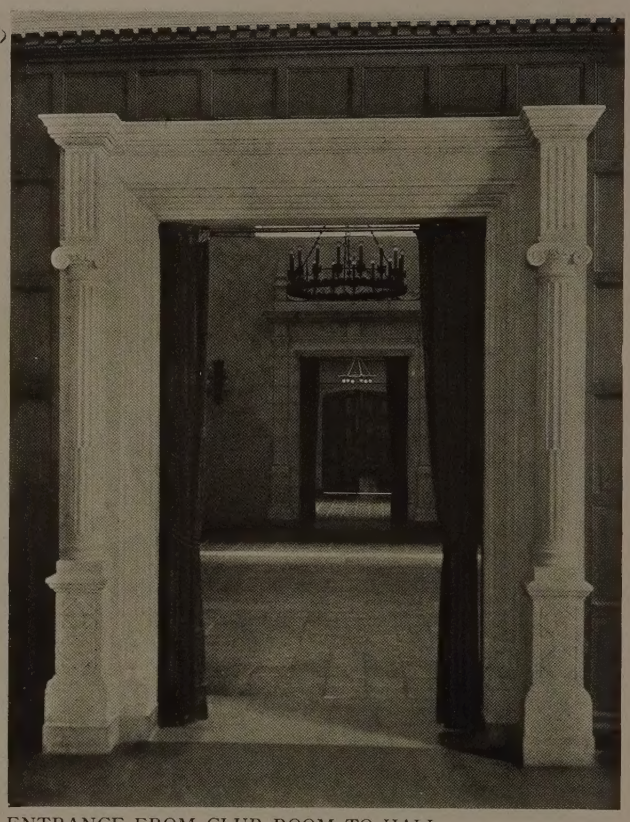
Lobby to dining-hall.

CORNER OF QUADRANGLE.

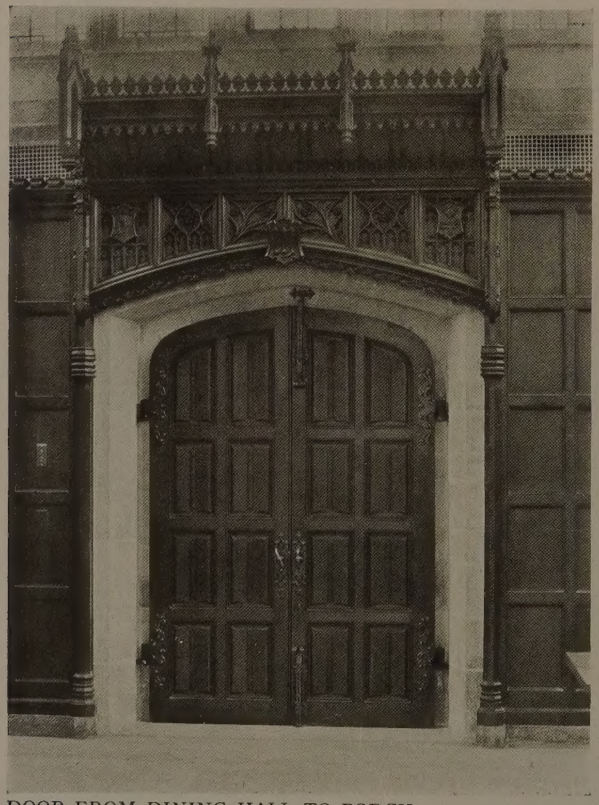
VIEW LOOKING WEST ON SOUTH UNIVERSITY AVENUE. York & Sawyer, Architects.

THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

ENTRANCE FROM HALL TO CLUB ROOM.



ENTRANCE FROM CLUB ROOM TO HALL.



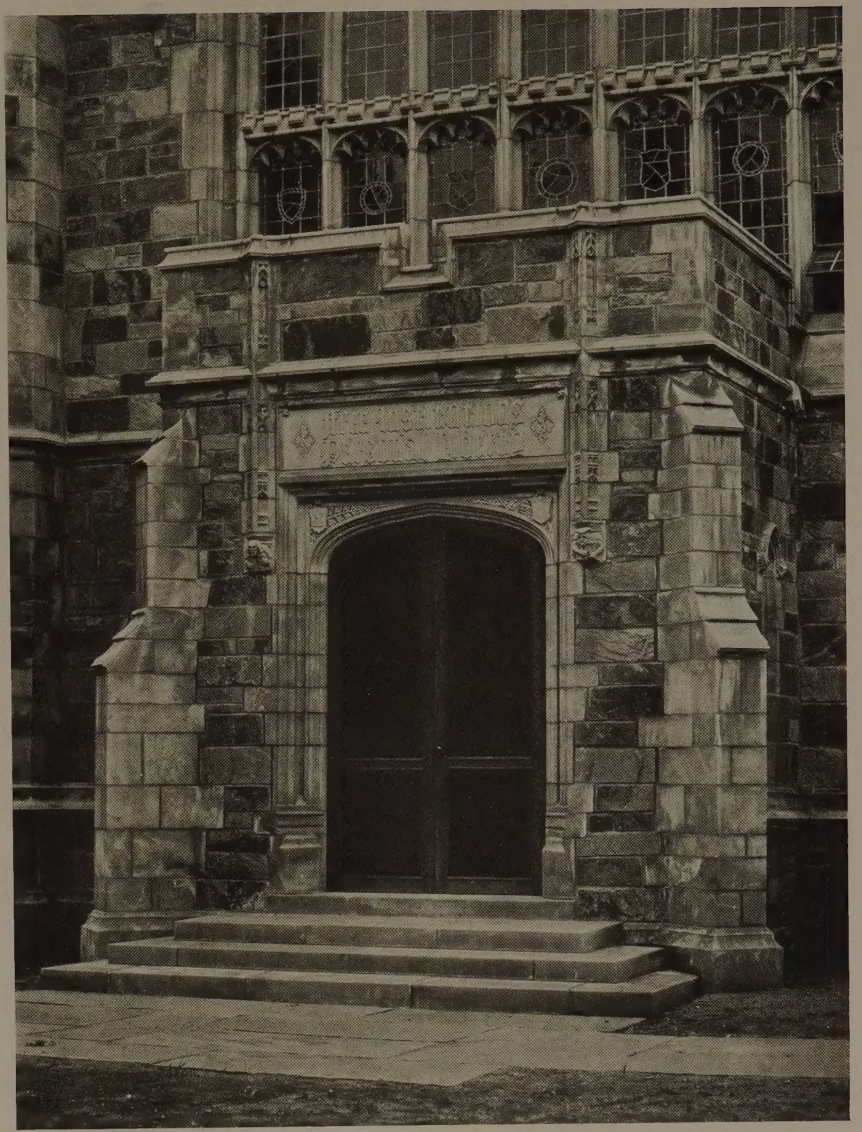
DOOR FROM DINING-HALL TO PORCH.

DOOR FROM DINING-HALL TO LOBBY.

THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

York & Sawyer, Architects.

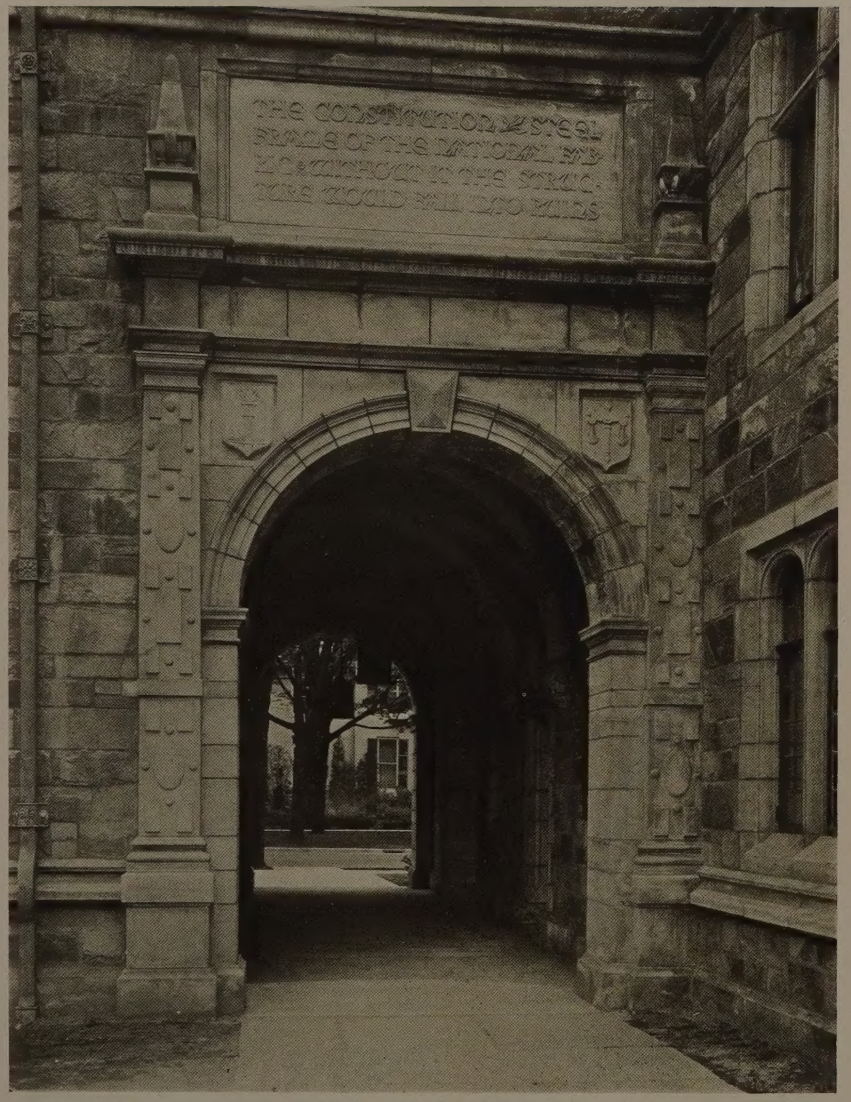
ENTRANCE TO MAIN TOWER.



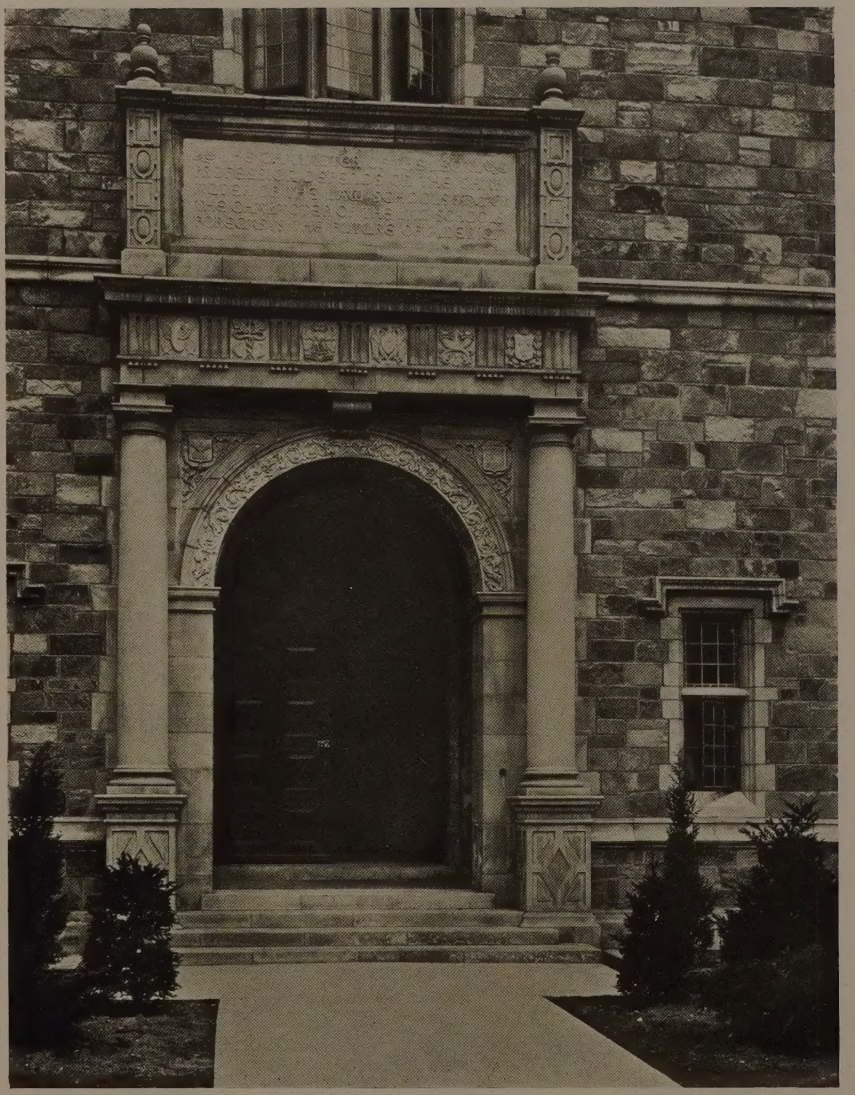
ENTRANCE PORCH TO DINING–HALL.

York & Sawyer, Architects.

THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.



ENTRANCE UNDER EAST TOWER FROM QUADRANGLE.



MAIN ENTRANCE TO CLUB BUILDING. York & Sawyer, Architects.

THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

The Romance of Building

By Richard P. Wallis

DURING our participation in the World War much favorable comment was elicited by the revolutionary methods introduced in the shipbuilding industry to create and maintain a merchant marine commensurate with the extraordinary demands that were thrust upon us during the uncertain days of 1917 and 1918.

The success of our expeditionary forces in the closing struggles of the Great War depended solely upon the "bridge of boats" that spanned the perilous seas from the manufacturing plants of America to the battle-lines in France. It was no insignificant task to provide, at a moment's notice, this shipping, as the once glorious American merchant marine had fallen upon evil days, and the production of ships as a trade was rapidly approaching the vanishing point. It was particularly difficult to produce the necessary parts without imposing too heavy a burden upon the already hard-pressed industries of the seaboard, thus dislocating our entire industrial effort.

A solution was found for this difficulty by calling upon the less-heavily burdened iron-working plants of the Middle West. In these widely scattered forges and rolling-mills, far removed from deep water, were fabricated in great quantities the frames and plating that were to be assembled at the shipyard to form the finished vessel.

The success of this innovation in shipyard practice was amply attested to by the almost inconceivable numbers in which the craft slid down the ways to do their bit for democracy. This adaptation of quantity production was rightfully hailed as another triumph of American ingenuity.

While this policy of limiting, as far as possible, the work at the site to the actual assembling of pre-fabricated parts was somewhat of a novelty as applied to shipbuilding, the principles involved have long been recognized as essential in the building trades.

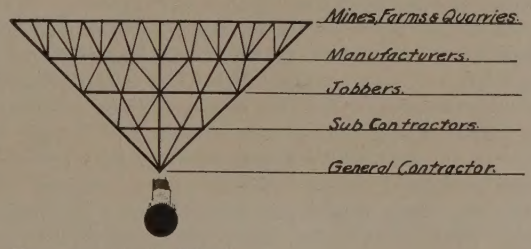
The difficulty confronting a contractor about to undertake the erection of a building or other structure may readily be conceived were it necessary for him to rely entirely upon his own immediate resources for the delicate bronzes, the ornate marbles, the sturdy framework, and the like, that form integral portions of a structure. Such a centralization of supply would impose insurmountable difficulties upon the contractor and it would prove impossible, under these conditions, to put together even the simplest type of structure, much less the monumental buildings that embellish our communities of to-day.

The ramifications of the building industry as now conducted are too utterly vast to permit of their being carried forward by individual effort. When we consider the many branches of the building business, the masonry, the structural members, the woodwork, the decorating, the various mechanical trades, each with its own peculiar technic and traditions, we may begin to appreciate the magnitude and perplexities of this, the second greatest industry of this great country.

To escape the dilemma imposed by the requirements of the building public the general contractor has been forced to seek the aid of specialists. These specialists—sub-contractors as they are called in the building business—are independent concerns, each versed in some particular trade. As many as thirty or more sub-contractors may be employed on a single operation, all working harmoniously under the direction of the general contractor and to all intents and purposes integral parts of his organization for that particular operation. By such an arrangement the contractor is assured of skilled service when required, and yet is relieved of the obligation of carrying a huge, unwieldy organization through the lean years that invariably beset this business.

These same sub-contractors in turn must rely upon the output of manufacturing plants for the material which, under the watchful guidance of the contractor, they are to embody in the building. Again, the manufacturer must look to the producer of raw materials for the crude product that ultimately is to find its resting place in the finished structure in order that the missing third dimension may be applied to the plans and specifications of the architect and that the dream and inspirations of the designer may become a concrete reality.

We thus have pictured before us a vast inverted pyramid with the general contractor as the apex, the intermediate



The pyramid of building.

portion standing for the sub-contractors, manufacturing plants, and jobbers, and the base representing countless mines, quarries, forests, farms, etc., scattered far and wide throughout the breadth of our great country, and even extending overseas for products foreign to America.

It is with the relationship of the apex of this pyramid to the base that we are to deal within the confines of this story in the hope that perhaps the reader will find the subject of sufficient interest to warrant his attention upon next pausing before a building in process of construction.

It is like a huge picture-puzzle, swinging the steel girders into place, setting the great blocks of stone and terra cotta, connecting up the heating and ventilating apparatus, and so on. The materials of each trade must fit perfectly in place, and yet each is produced in widely scattered plants, from different materials, and in divers manners. The wonder of it all is that such a heterogeneous array of pre-wrought parts can, under any circumstances, fall into place to form the finished structure. And yet such is the practice of building.

We are all too prone to regard a building operation as a purely local affair, depending upon local labor and materials. This is easily understandable as the preliminary operations, carried on in hundreds of widely scattered plants, are not always in evidence, and all that is apparent is the assembly of the thousand and one parts that go to make the complete structure.

As regards the production of the raw ingredients, the efforts of the producers certainly are entirely impersonal as far as any individual operation is concerned. The steam-shovel operator, coaxing the raw red ore of the Mesaba

Range into the dinky ore-cars, has no knowledge and less interest in the fate of the ore once it is hauled away. Chemistry and metallurgy may transform it into a steel girder for some structure many thousands of miles distant, or even into another steam-shovel that may in turn augment the supply of ore, or perhaps into a fabricated ship, but to the operator it is but part of the day's work. The same is true of the lumber-jack in the fast diminishing lumber stands of the Pacific coast, or with the farmer of North Dakota engaged in cultivating his acreage of flax. None the less, the uncorrelated activities of these widely scattered individuals are an essential part of all building operations, and without them there would be no building.

It is when building operations are viewed in this light that we begin to realize how interwoven they are in the economic fabric of this country. The transportation of these vast quantities of materials used annually in this business affords no small portion of the revenues of our railroads.

In 1923 alone 3,745,485 freight-cars were loaded with forest products. This is the equivalent of a train nearly 28,300 miles in length, or long enough to reach once around the earth at the equator, with cars enough left over to reach from New York City to San Francisco. One car of every fourteen was loaded with lumber products. The freight bill of the nation for lumber alone amounted to about $300,000,000. To transport the product of our various Portland cement plants requires three-quarters as many freight-cars as are needed to move the nation's entire wheat crop, and so on down the list.

The financing of these multifarious operations constitutes an important function of our banking system. Every way we turn we find the imprint of building operations.

There is romance in the fitting together of these parts, creating an individual something that existed before only on paper and in the mind of the designer. There is, also, romance in this widely distributed impersonal effort on the part of countless of thousands of workers throughout the world, each doing his part, so that human advancement may be achieved through the erection of manufacturing plants, residences, monumental structures, and so on.

The Cleveland Public Library. Walker & Weeks, Architects.

In order to bring our discussion within the realms of the concrete, let us consider the new Cleveland Public Library now under construction and the various sources from which are drawn those materials that will lend grace and dignity to the building as well as those humbler portions of the structure that perform their tasks unheralded and unsung.

The Cleveland Public Library, designed by Walker & Weeks, is a monumental structure—six stories in height, of rectangular outline—occupying an area of 195 feet by 216 feet, with a large central court admitting light and air to the inner portions of the building. The exterior is of classic design, and its rusticated walls and colonnades of mezzotint Georgia marble render it a most fitting addition to the Mall group, that ambitious group of public buildings stretching from the heart of the city to the blue waters of Lake Erie, a monument not only to Cleveland but to the far-seeing acumen of our city-planners.

At the present moment it would indeed be difficult to picture the spacious reading-rooms, tiered high with volumes of variegated hue, the capacious corridors wainscoted with exquisite marbles, the vaulted dome of Brett Hall with its coffered ceiling supported on columns of black-and-gold marble, lighted with a soft glow of diffused light from its four arched windows.

To-day all is apparently confusion and dirt. Skeletonlike scaffolds mount high overhead, a litter of dirt and débris carpets the floors, and the sturdy structure of the building stands forth naked in all its primitiveness. Workmen are everywhere bent upon the seemingly hopeless task of bringing order out of

A Southern pine sawmill.

chaos. Up the hatchway that will some day convey books and visitors to the various floors rush uncouth elevators bearing barrows of brick and mortar. It is indeed difficult to visualize the ultimate respectability that will eventually supplant the scene of grime and sweat that is so evident at the present, but the homely chrysalis will shortly give birth to the exquisite butterfly.

The elaborate design and widely diversified character of this structure made it incumbent upon the contractor to seek far and wide among the markets of the world for the interlocking fragments of this great three-dimensioned picture-puzzle.

Had it been necessary, by force of circumstance, for the contractor to seek his materials in the raw, had he been forced to establish and maintain the various intricate manufacturing processes so necessary for converting the crude products of the earth into the finished article available for his purpose, his embarrassment at how to start and where to turn might well be imagined.

But, fortunately, the whole complex industrial organizations of this great country stood at his beck and call. Farms, mines, railroads, and workshops were already functioning; great stocks of raw materials were in process of accumulation at the iron mines of Minnesota, the copper mines of Montana and the Southwest, the cement mills at Sandusky, the marble quarries of sunny Italy, and the farms of the Dakotas. Already long trains of lumbering, clanking freight-cars had laboriously transported these raw products to the smoky, dirty manufacturing centres. Here in the iron and steel plants of Bethlehem, Minneapolis, Canton, and Cleveland, the cement mills of Sandusky, and so on, armies of skilled labor and batteries of ingenious mechanical devices were busily wielding the magic wand that transforms the raw product into the finished article of commerce.

The contractor had but to turn to these already constituted agencies of production for the means necessary to the fulfilment of his contract.

In order to present in graphic form the wide distribution of the various sources of supply from which were drawn the ingredients that make up the library, the accompanying chart has been prepared, clearly showing the universality of building operations as conducted to-day. Cleveland is represented on this map of the United States by a star. The radiating lines diverging to the four points of the compass lead to the various locations that have contributed their quota to the erection of this great structure. The encircled numerals at the termination of these radii refer in each case to the accompanying index, wherein is listed a tally of these raw ingredients so vital to the success of such a building venture.

It is obvious that natural deposits of minerals are not constrained by political boundary lines. Copper, for instance, is mined in commercial quantities in many widely scattered portions of our country. The deposits of northern Michigan, Montana, Arizona, and Utah are all of primary importance in our industrial life. Likewise, cultivated crops such as flax, from which is derived linseed oil, are grown by farmers wherever climatic and soil conditions are favorable for the production of good crops. The agricultural districts of the Northwestern United States, Canada, the Argentine, and to a smaller extent in many European countries produce the majority of linseed oil used in paints, linoleum, etc.

Cattle, whose hides adorn the leather-covered doors, whose bones form an important ingredient of the glue-pot, and whose hair serves as a plaster bond, range where the grazing is best—irrespective of State or national boundary lines.

There are but few raw ingredients limited in source to a particular area by virtue of some exceptional characteristic that places them in particular demand to the exclusion of other materials of a similar nature.

Such an almost universal distribution of raw products as we find existing in this fortunate land complicated to a certain extent the preparation of this chart.

Certain materials, such as lead and copper, are important ingredients of the product of many factories. These manufacturing plants obtain their stock, in all probability, from widely scattered sources, so that, for example, the white-lead pigment of the painted decorations of Brett Hall might actually trace its lineage to Oklahoma, Missouri, Illinois, and in fact to all of the States of the Union where lead is produced commercially.

To obviate the tangle of radiating lines resulting from an attempt to portray each and every individual source and to simplify, as far as possible, the construction of the chart, only the principal commercial sources are shown for those materials indigenous to two or more localities. Where, however, a number of plants employ similar materials in their process of manufacture, but for some particular reason of intrinsic quality or appearance draw their stock from different sources, all of these localities are shown with the proper serial number, followed by a suffix, "A," "B," etc.

The definition of the term "raw material" likewise presented certain difficulties. All material, regardless of its ultimate form and appearance, may be resolved down into its constituent chemical elements. These again are composed of a bewildering assortment of alpha and beta particles, grouped together in characteristic geometric array that leaves the reader hopelessly bewildered in the intricacies of this newest of sciences—atomic structure.

Geographical distribution of raw materials Cleveland Public Library. Library represented by star.

To spare the reader the horrors of such an unkind fate the attempt has been made to limit our subdivision to the point at which these embryonic building materials are taken from the earth or from the fields and before they are subjected to the action of those laws of chemistry and physics that constitute the process of manufacture.

The responsibility of housing the priceless literary treasures of the people of Cleveland carried with it the duty of protection from fire, wind, and water. The use of perishable and combustible materials has, as a consequence, been reduced to a minimum, both in the building and furnishings.

Permanency must be married to art, and the union must beget utility.

Perusal of the accompanying index indicates that fully 78 per cent of the items composing the library are drawn from the bowels of the earth. Of the remaining, the vegetable kingdom contributed 18 per cent and the animal kingdom 4 per cent.

Products native to thirty-one States of the Union and two Territories are found forming integral portions of this structure. Five continents are drawn upon for those certain materials indigenous thereto by accident of climate or geology.

It becomes very obvious that the erection of a library in the city of Cleveland is anything but an affair of local interest. It is a matter of consequence for the entire world. It is only through the prosecution of a large aggregate of individual operations such as this that a market is found for the industrial activity of the world at large.

We are no longer forced to rely entirely upon our own sources of supply, and this vast extension of trade is a potent influence in breaking down the barriers of our political isolation.

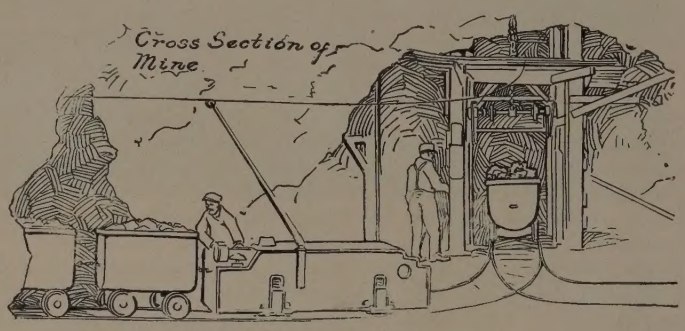
The story of each and every one of the various materials forming a part of the library and its development from the initial state to the finished article is one replete with romance. How man first came to appreciate the inherent possibilities of the various products of nature that formed a part of his every-day landscape is a question that never has been entirely answered. The only explanation lies in the conscious direction of effort that differentiates man from the lower forms of animal life. Just as the infinitely slow process of evolution during the geologic eras spanned a period too vast for finite minds to grasp, so did the rudimentary groupings of our anthropoid ancestors for better things, though in a relatively much less degree.

The entire social fabric of our lives to-day represents the painful persistency of our progenitors in, figuratively speaking, putting two and two together. The fruits of this persevering accumulation of effort give to us our knowledge of chemistry and physics that makes possible the intricate manufacturing processes that to us appear so simple. Quantity production, the inevitable corollary of our ever-higher standard of living, is among the wonders of the age. Without mass production and the methods incident thereto structures such as the library would be impossible, costs would prove prohibitive, and the entire advance of mankind would be impeded and retarded by the inability to finance such undertakings.

An entire volume might well be written dealing with the history of the component parts of such a structure as the library. Such an exposition would treat of war, discovery, and trade, as these are all essential factors in our industrial development. The plodding development of our manufacturing processes and the utilization of raw materials in their ultimate form in ever broadening spheres of activity afford an engrossing commentary on the restless ingenuity of man in wresting from reluctant nature those secrets that have made it possible for him and his to dominate the earth.

The extent and variety of effort involved in the manufacture of even a single article of commerce is well illustrated in the accompanying chart (Figure IV), published through the courtesy of the National Lamp Works of the General Electric Company, showing the geographic distribution of the various raw materials entering into the manufacture of the Mazda lamp.

Even in the case of this small object, so familiar to us all and so necessary in our scheme of existence, the industries of many nations are called upon to furnish the various ingredients. These raw products must in turn be transported over land and sea and ultimately converted into useful form before even the initial process of assembly may commence.



From pit to paint-pot. The story of white lead.

This same life story is true to a greater or less extent in the case of practically all of the component parts of a great building.

It would be manifestly impossible in the confines of this story even to touch upon all of the various raw materials and the methods employed to convert them to the use of man. For that reason it is the intention of the writer to touch but briefly on the history and manufacturing process incidental to a few of the vast number of natural products utilized in the business of building.

Man's progress through the ages has been permanently recorded by those structures left us as a heritage of the past. The architectural expression and structural details of these venerable edifices reveal much of the intimate life of the particular period in which they were erected. These evidences of antiquity are at the best but fragmentary. Restless nature in her constant war of attrition has obliterated the bulk of the handiwork of our ancestral builders. Those scattered monuments of the past that have been spared the despoiling hand of wind and weather owe their longevity to the enduring materials of which they were composed.

The marbles, limestones, and granites composing these historic relics differ in no respect from those in common use to-day. The preparation of these quarried products for use in early building construction entailed the application of certain apparently well-understood laws of mechanics. The modern quarryman has but availed himself of the refinements of these same laws made possible by a twentieth-century civilization; the principle involved remains the same.

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Published by Charles Scribner's Sons
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Editorial and Other Comment

The Brotherhood of Art

ART is, in very truth, a universal language, and how well it is understood by those who use it, whatever may be the spoken word of their native lands. We hear it said that the artist is a jealous and a self-centred individual, that he is bound by his own vision, and rarely sees beyond his own cultural horizon. But isn't this the point of view of the philistine, and due to a lack of understanding of the man or woman worth the name of artist? How quickly a group of artist folk can fraternize, how keen may be their sympathies, how cordial their support of real achievement. The language of diplomacy, the formal speech-making of the propagandist, the big talk of the professional teacher, have their places, no doubt, but at best they only occasionally get by the self-possession of their hearers, rarely indeed touch the common human note of sympathy and kindly feeling, that are, after all, the enduring impressions one carries away from listening to a public address.

It was this impression that was left with us by Sir Edwin Lutyens in his response to the presentation to him of the gold medal of the American Institute of Architects. He was speaking to men who are striving as he is, to add something of beauty to the world. In his own art he has done "a service which unites the New World with the Old." It gives us pleasure to quote the following from Sir Edwin's address, because it not only expresses the common bond of art, but beyond that the unaffected modesty and kindly personality of the man:

"This medal, which I have the honor of accepting, is more than a graceful compliment embedded in a valuable gift from colleagues; colleagues whose affectionate esteem I most sincerely value, and to whom I proffer the due expression of my grateful thanks in words which must necessarily be both inadequate and unworthy.

. . . . . .

"I feel that the joy of this occasion is as much yours as mine, for I must view it impersonally and internationally. The giving and receiving of this golden symbol of American love for British architecture means not only comradeship in work and sympathy of ideal but combination of hearts.

"Ladies and gentlemen, this recognition by America of the present situation of English architecture must have a stimulating and altogether healthful influence upon our thought. We, from a distance of 3,000 miles, have wondered at the vigorous aspiration and marked spirit of independence in American architecture.

"America has so much to think about and do; her outlook seems to have a wider range than ours, her opportunities appear so unlimited, her achievement so extraordinary, that she might well be excused for forgetting those things that are behind, across the ocean, in her reach forward. Hence preoccupation with herself, architecturally, could excite neither criticism nor surprise, for the differing character and magnitude of her problems would excuse any concentration of attention upon her own progress.

"But this demonstration of your sympathetic interest in modern English architecture, by the honor which you have bestowed upon me, links together spheres of practice and ideals which though seemingly separated are neither divergent nor singular.

"It is not for me to attempt to reciprocate your graceful homage to English art with any measure of appreciative criticism of your own effort; this would in any case be insufficient and perhaps impertinent, but I would venture to assure you of the constant and eager interest with which the rapidity of architectural development and the grandeur of its results here in America are followed at home. Be pleased to accept as from a British fellow-worker, for the moment a representative, this assurance of our admiration, affection, and gratitude."

"Fake Imitations"

IN an address before the recent Convention of the American Institute of Architects, Mr. Monroe Hewlett had some pertinent and interesting things to say on the above topic. Paste diamonds are common enough, and also the kind of folks who like to flash them, but the dealers in jewels who value their reputations, and upon whose sparklers you can raise real money—of course if the unfortunate occasion should arise—do not keep or sell the fake spotlights.

There are many things manufactured these days that make for economy, speed in building and lightness of structure, and they have come to stay and play a useful part. Mr. Hewlett referred to "tin and copper made to look like terra-cotta tile, concrete made to look like wood, fibrous board made to look like marble, everything not itself but faked up to look like something else. The joints in wall-board are hidden so the walls look as if plastered, etc."

We do not see any particular objection to the last, but we heartily endorse Mr. Hewlett's animadversions on the obvious fakes.

A beamed ceiling of concrete does not appeal to us, and we don't want to dream that we dwelt in marble halls and wake to kick a hole through a partition of fibrous or other walls that are but a delusion and a snare. Give us the real goods, we say, be they never so humble.

There is too much tawdry and cheap decoration spread over public places, too much bad taste shown in the furnishing of apartments and homes, too much noisy display of things that are not what they seem. But maybe a desire for even the things that are bad may lead, in time, to something better. Many a collector of paintings or prints has, in the very process, acquired an education in art that has

proved itself in full measure by the prices brought in the auction rooms upon the settlement of the estate.

Let us trust that the dear people who are led into strange byways in decoration may, as the years go, become wiser and less prone to "fake imitations."

Residential Work Leads

THE amount of residential work throughout the country promises to exceed the remarkable record of last year. Wherever you go you see houses going up, many of them of moderate cost, and many of them, we are pleased to say, showing a high average of good taste in design.

Contracts awarded in New York and Northern New Jersey in April were again much below the level of a year ago, and for the first four months of this year were nearly 30 per cent smaller than last year. Due, however, to large increases in other districts, the April total for the country was the largest ever reported, and for the first four months of the year was 7 per cent larger than in the corresponding period of any previous year.

Building permits, which precede contracts, also showed in April a large increase over last year for the country, and in the case of permits the increase was shared by New York City, where the April figures last year were relatively small, due to expiration of the tax exemption privilege for residential building at the end of March. For the first four months of this year, however, permits for this city continued substantially smaller than a year ago.

In all districts except New York the value of contracts has been equal to or larger than a year ago. Despite the heavy building of recent years, the volume of residential construction for the country as a whole continues close to the high level of last year.

Going Down!

THE old Delmonico building, a Fifth Avenue landmark, has been sold again and will soon give place to a tall office-building; the beautiful Francis I palace known as the W. K. Vanderbilt house is doomed; the big Netherland Hotel and the Savoy have entertained their last guests, and the famous Astor home will be replaced by an apartment-house. The old-timer, who remembers his Fifth Avenue of the past and used to pride himself on being able to point out the homes of the more or less socially notable, is now confronted with the problem of keeping tabs on the newest shops and apartment-houses. Such is progress, the old order changeth, and maybe the old-timer sighs and thinks the world is going to the bow-wows. But the new-timers, the younger generation, will carry on and continue the new set-back architecture that is obliterating the long vista of brownstone residences they know only in some rare picture of old New York. We are going down, but only to rise again in a new vision that not only expresses the restless and insatiable greed of the money-seekers, but as well the ability of our architects to meet new and unprecedented conditions. The past is dead, the future beckons and invites the dreamers of new fortunes for old. What a whirling mess of human atoms and gasoline-wagons New York has become! It is, as Mr. Granger called it, "The Terrifying Town."

Color

WE are conservative in the use of color. Mr. Hood's American Radiator tower shocked and offended some of our good friends from the Middle West who saw it for the first time recently. "I can't go that Radiator Building," said one well-known Chicago man, but he admitted that maybe it was a matter of getting used to it. That's it. We need to get used to a freer use of color in general. In some remarks on color by Professor Beresford Pite he gave the following advice on the value of contrasts: "Whatever you do, avoid any attempt at harmony in color. Go for contrast. Don't dress your buildings as a lady dresses her person, with the sweetness of harmony. Dress your buildings as a soldier dresses himself, with contrast. Learn from the Byzantine murals—always contrast, never harmony." We are inclined to think that "the sweetness of harmony" referred to is based on the professor's homeland observations—for he is an Englishman.

Medals Awarded by the Philadelphia Chapter A. I. A.

THE Annual Dinner and Meeting of the Philadelphia Chapter of the American Institute of Architects was held on the evening of May 15, 1925, at the Art Club. This followed the Private View which opened the Twenty-eighth Annual Exhibition of Architecture and City Planning, held jointly with the T-Square Club.

The presentation of the medal for this year was made by Clarence C. Zantzinger on behalf of the chapter and the Jury of Award. The medal was presented to Howell Lewis Shay, chapter member of the firm of Ritter & Shay, for their skilful solution of a bank and office-building problem—the Packard Building, 15th and Chestnut Streets, Philadelphia.

This medal is awarded annually by the chapter for the best designed executed work shown at the Annual Architectural Exhibition. The medal may be awarded to Philadelphia chapter members only, and cannot be awarded to the same architect or firm of architects more than once.

The following awards having been made in the past, their authors were ineligible for award at this time:

1917—Wilson, Eyre & McIlvaine.
1918—Day & Klauder.
1919—No exhibition held, hence no awards.
1920—No exhibition held, hence no awards.
1921—Paul P. Cret & Zantzinger, Borie & Medary.
1922—Mellor, Meigs & Howe.
1923—McLanahan & Bencker.
1924—Edmund B. Gilchrist.

The Jury of Award for 1925 consisted of: Wm. Adams Delano, New York; Theodore W. Pietsch, Baltimore; John A. Dempwolf, York, Pa., who were also guests of the evening.

Winners of the Prix de Rome

THE coveted Prix de Rome in painting and sculpture has been awarded by the American Academy in Rome as follows:

The fellowship in painting was awarded to Michael Joseph Mueller, a post-graduate student of the Yale School of Fine Arts. Mueller, who is thirty-one years old, won with a mural decoration entitled, "Eternal Life." He was second choice for the award last year, receiving honorable mention.

Walter Hancock, a student of the Pennsylvania Academy of Fine Arts, at Philadelphia, received the fellowship in sculpture. He also was awarded the Widener gold medal in the Pennsylvania Academy exhibition last winter.

The juries which awarded the prizes consisted of Edwin H. Blashfield, Francis C. Jones, Barry Faulkner, Douglas Volk, and Eugene F. Savage for painting, and Daniel Chester French, Herbert Adams, Charles Keck, Adolph A. Weinman, and James Earle Fraser for sculpture.

CLUB BUILDING, DINING–HALL, AND KITCHEN FROM STATE STREET. York & Sawyer, Architects.

THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

MAIN TOWER, THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH. York & Sawyer, Architects.

EAST TOWER, THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH. York & Sawyer, Architects.

ENTRANCE TO DORMITORY.

VIEW LOOKING EAST ON SOUTH UNIVERSITY AVENUE.

THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

York & Sawyer, Architects.

INTERIOR OF DINING-HALL. York & Sawyer, Architects.

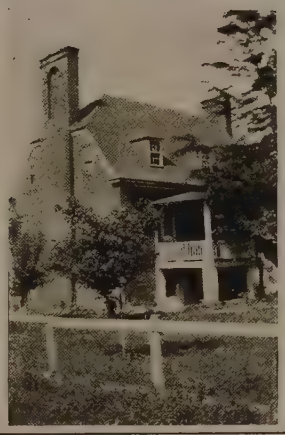
THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

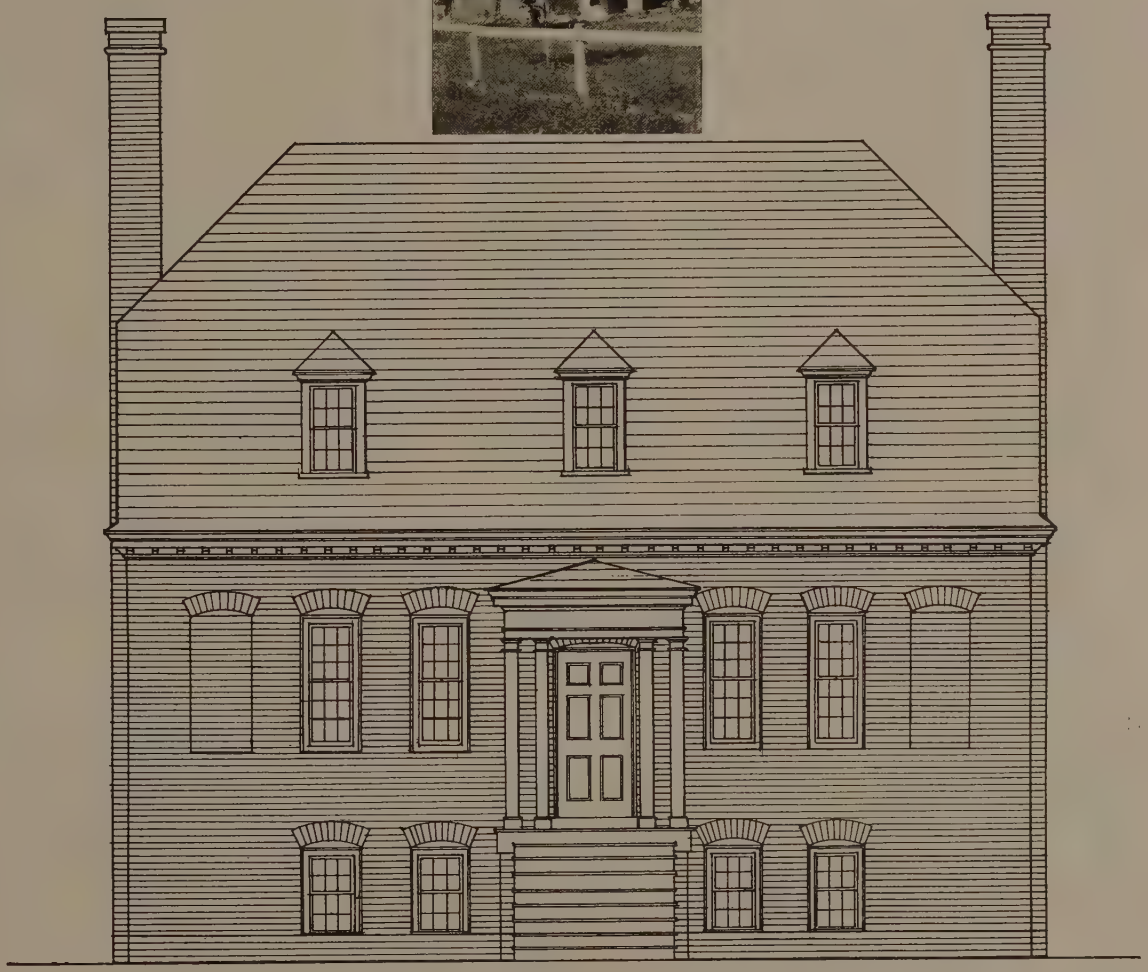
INTERIOR OF CLUB-ROOM, LOOKING NORTH.

INTERIOR OF CLUB-ROOM, LOOKING SOUTH.

York & Sawyer, Architects.

THE LAW COURTS BUILDING, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.





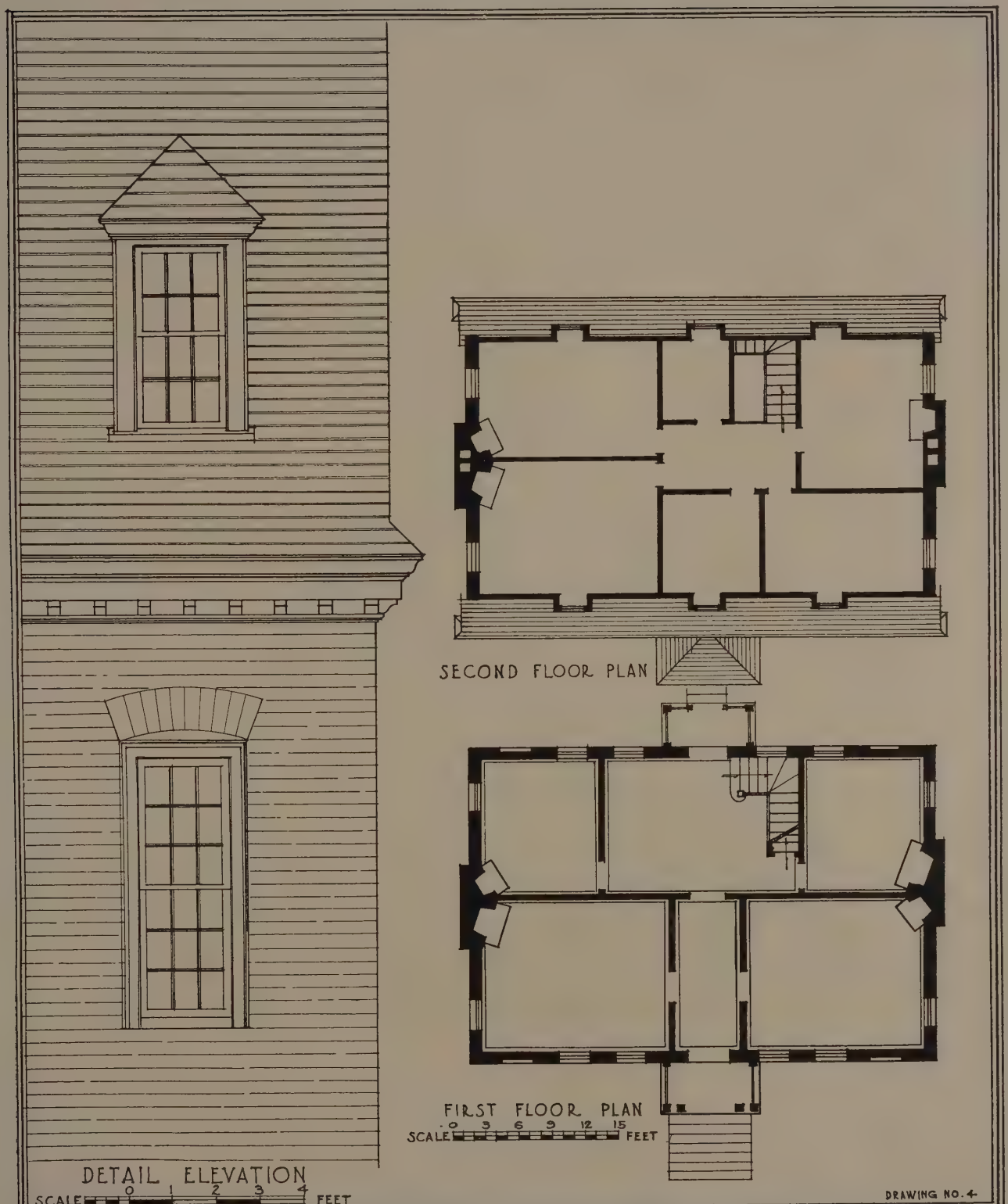
SOUTH ELEVATION

SCALE 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 FEET

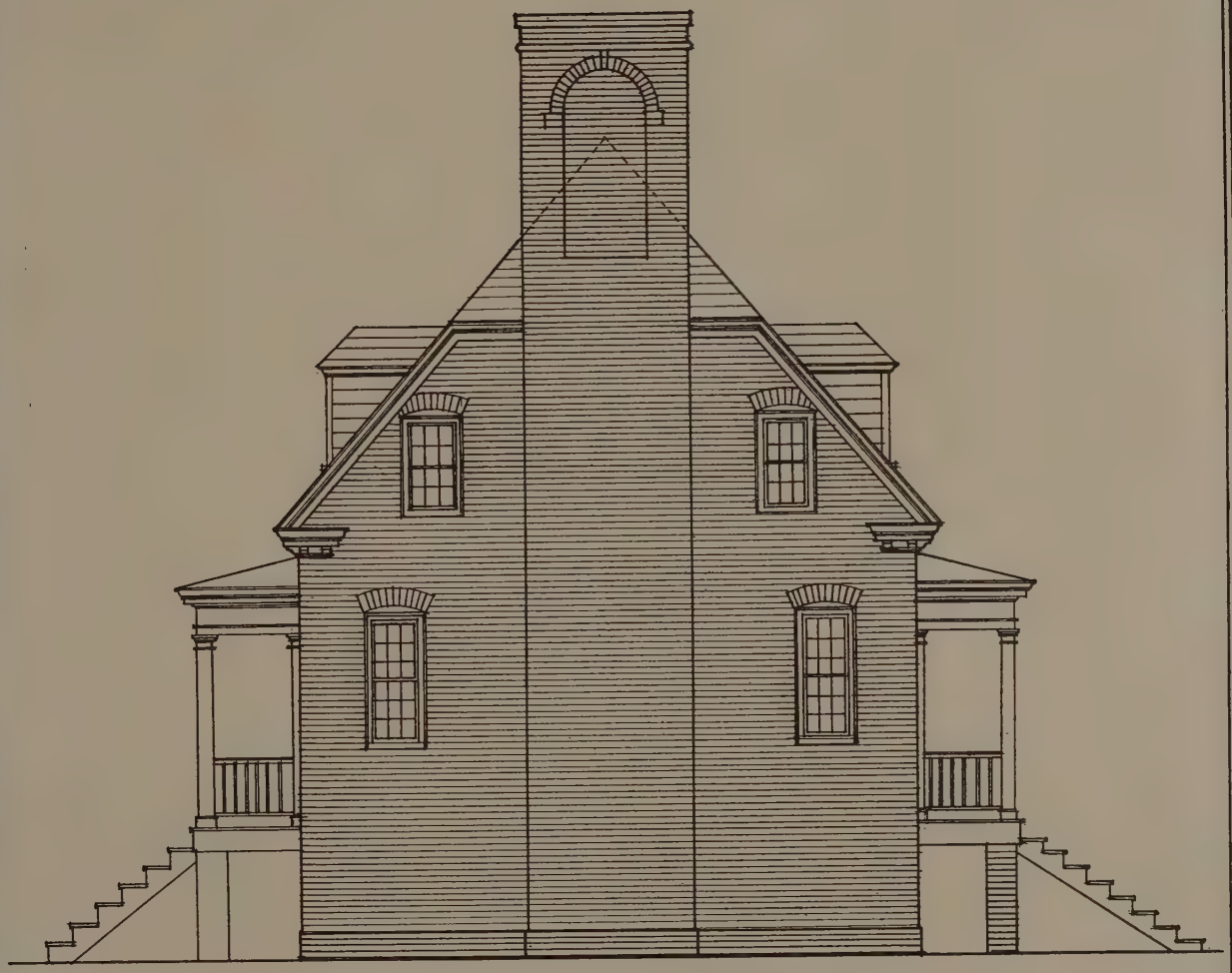
NORTH ELEVATION SIMILAR

DRAWING NO. 1

EARLY COLONIAL ARCHITECTURE OF MARYLAND	A HOUSE IN BLADENSBURG MARYLAND ON THE ANNAPOLIS ROAD BUILT CIRCA. 1750	MEASURED AND DRAWN BY ALBERT P ERB



EARLY COLONIAL ARCHITECTURE OF MARYLAND	A HOUSE IN BLADENSBURG, MARYLAND ON THE ANNAPOLIS ROAD BUILT CIRCA 1750	MEASURED AND DRAWN BY ALBERT P. ERB

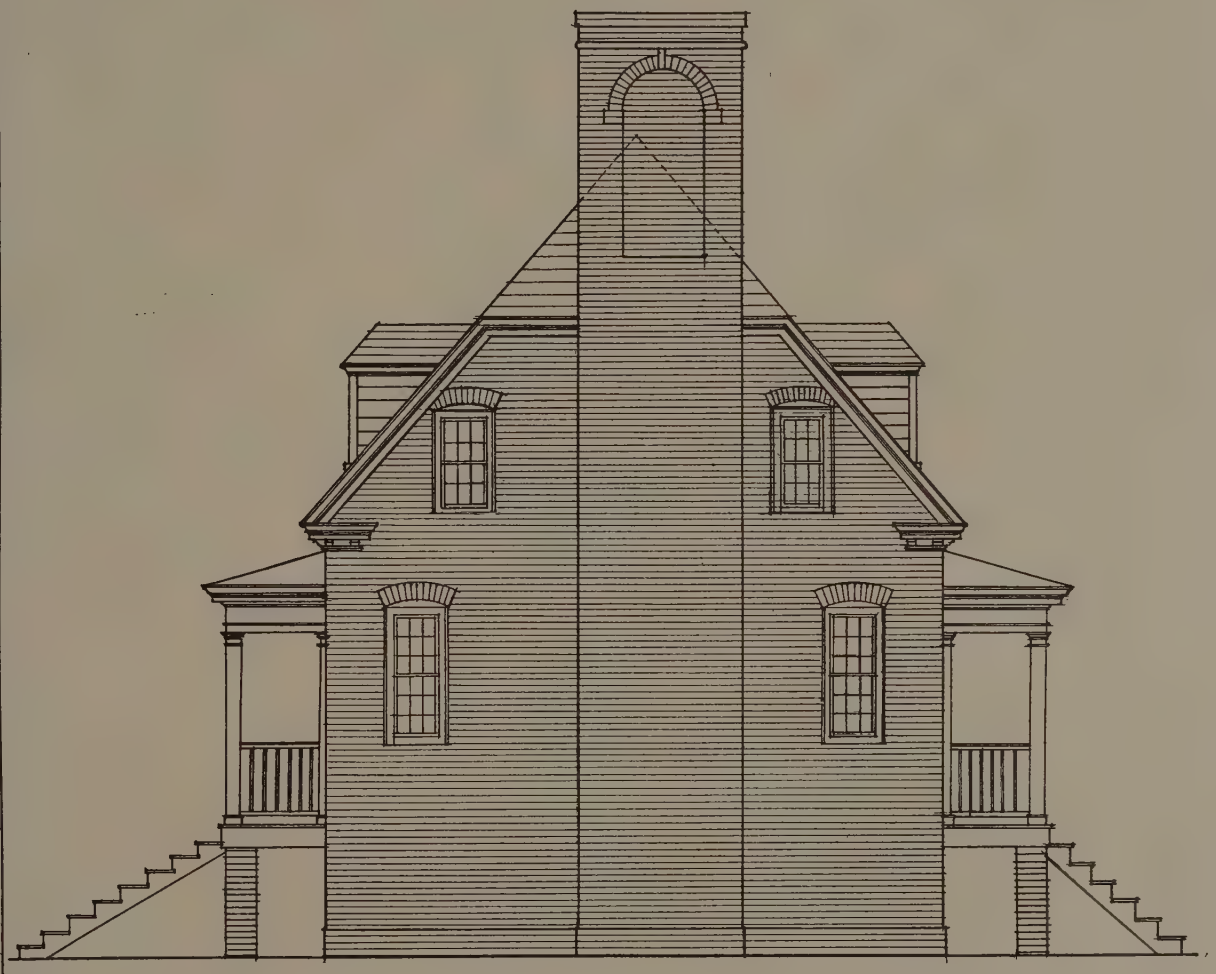


WEST ELEVATION

SCALE 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 FEET

DRAWING NO. 3

EARLY COLONIAL ARCHITECTURE OF MARYLAND	A HOUSE IN BLADENSBURG, MARYLAND ON THE ANNAPOLIS ROAD BUILT CIRCA. 1750	MEASURED AND DRAWN BY ALBERT P. ERB



EAST ELEVATION

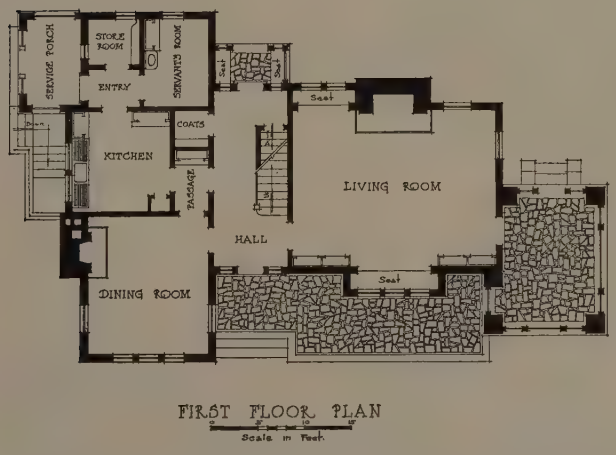
SCALE 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 FEET

DRAWING NO. 2

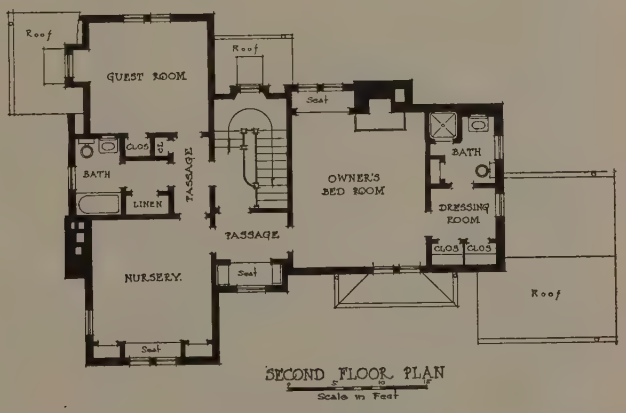
EARLY COLONIAL ARCHITECTURE OF MARYLAND	A HOUSE IN BLADENSBURG, MARYLAND ON THE ANNAPOLIS ROAD BUILT CIRCA. 1750	MEASURED AND DRAWN BY ALBERT P. ERB

RESIDENCE, A. G. LAMBERT, SOUTHAMPTON-ON-JAMES, VA. Baskervill & Lambert, Architects.

REAR OF HOUSE.



FIRST FLOOR PLAN

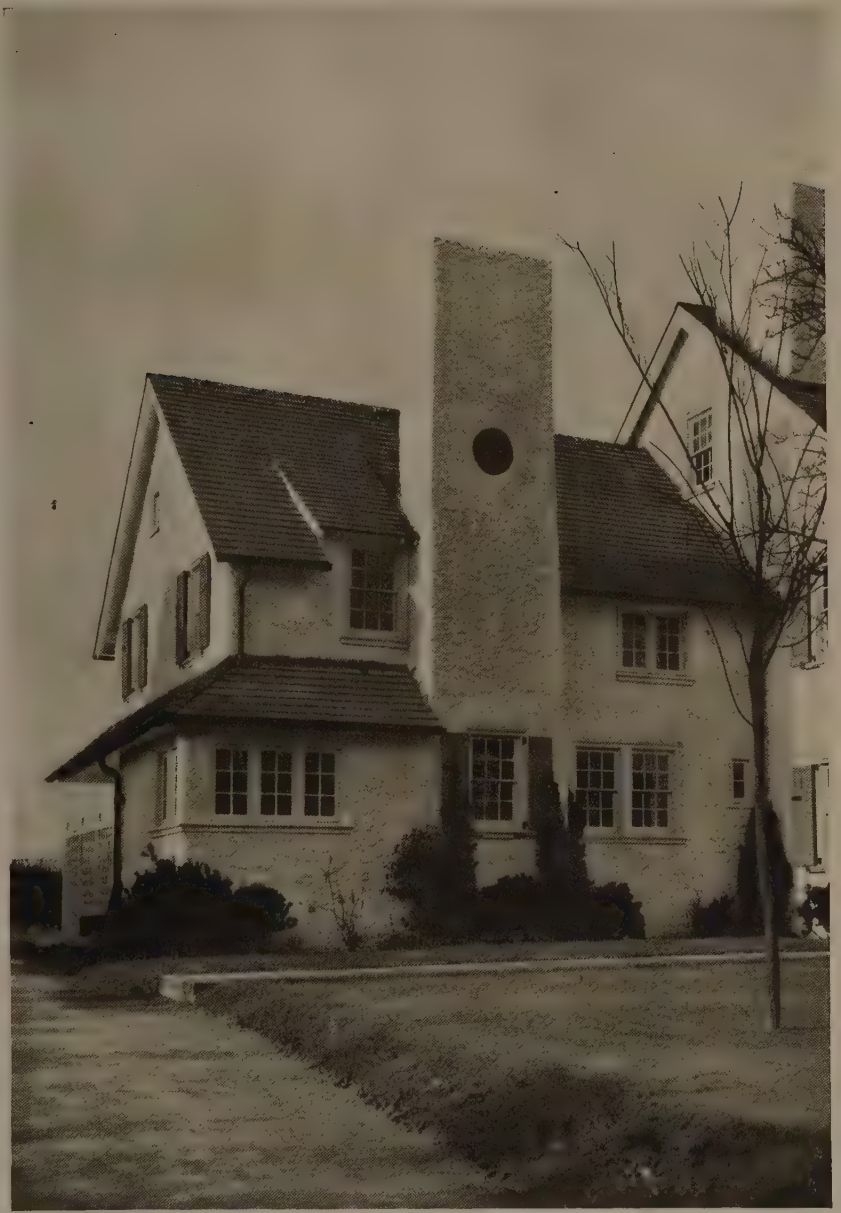


SECOND FLOOR PLAN

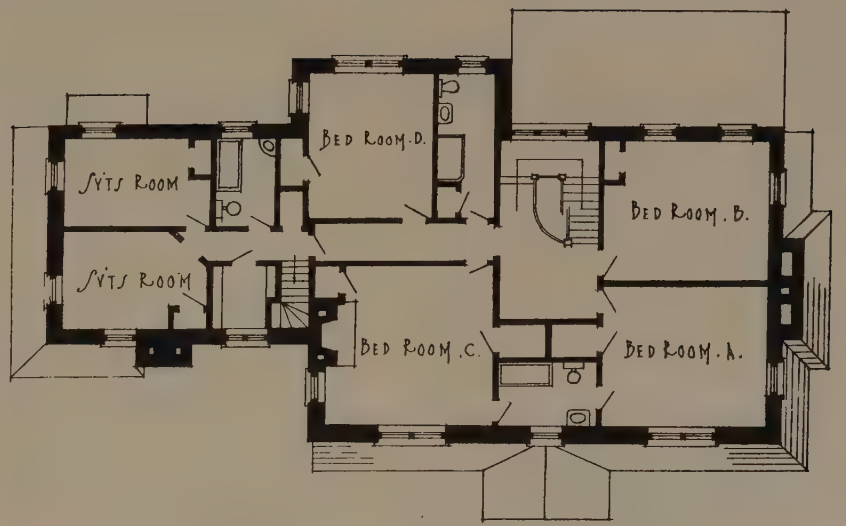
RESIDENCE, A. G. LAMBERT, SOUTHAMPTON-ON-JAMES, VA.

Baskervill & Lambert, Architects.

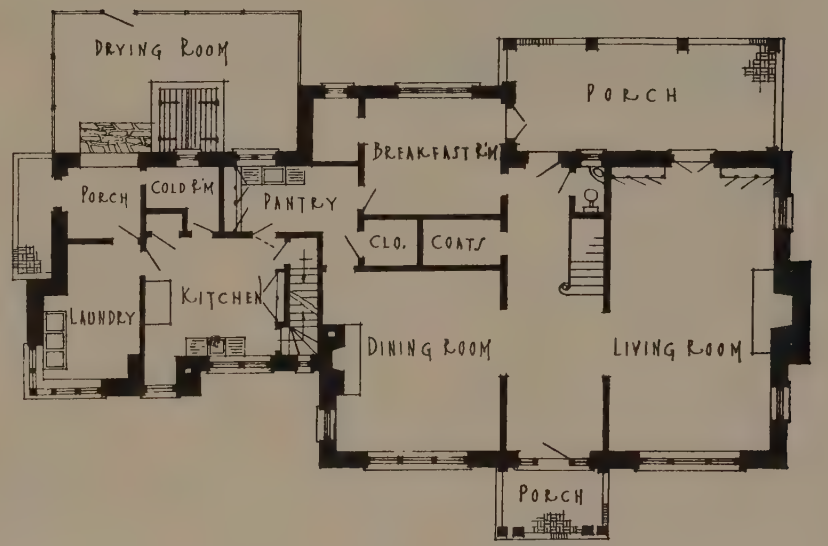
RESIDENCE, RICHARD P. BROWN, GERMANTOWN, PA. C. A. Ziegler, Architect.



RESIDENCE, RICHARD P. BROWN, GERMANTOWN, PA.



- SECOND · FLOOR · PLAN -



- FIRST · FLOOR · PLAN -

C. A. Ziegler, Architect.

LABEL MOULD AT Ⓑ

SECTION THRU ARCH AT Ⓐ

REPEAT FOR EACH COLONNETTE OF JAMB

JAMB OF WINDOWS

SECTION THRU JAMB AT Ⓒ

BELT COURSE

TRACERY IN HEADS OF PANELS

SECTION THRU RAIL AT Ⓓ

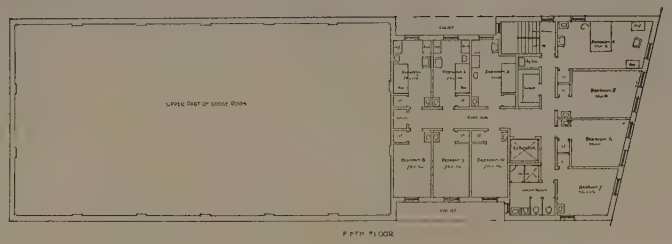
CONSTRUCTION OF BACK OF DOOR

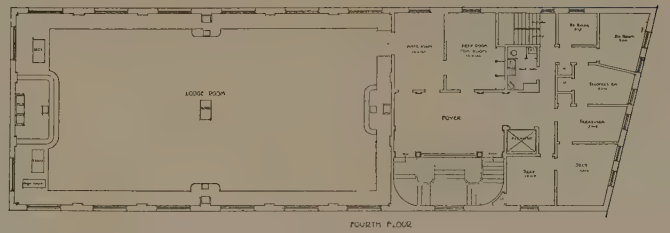
ELEVATION

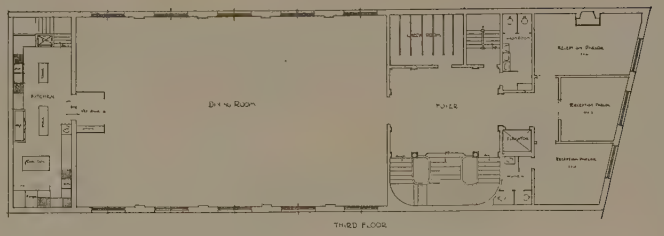
SECTION THRU DOOR AT Ⓔ

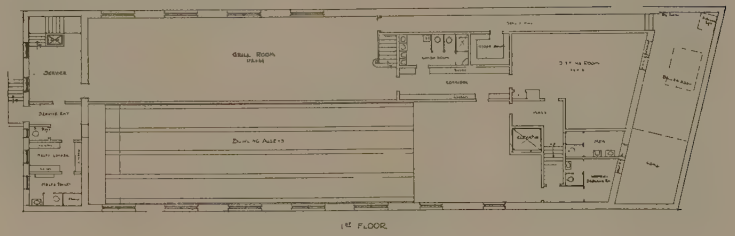
MULLION AT Ⓕ

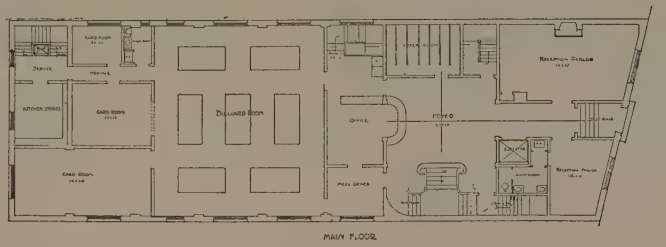
ARCHITECTURAL DETAILS ENGLISH NO SERIES ⑥	OXFORD COMMON-GATE FROM THE WEST ST JOHN'S COLLEGE	MEASURED AND DRAWN BY E. PICKERING











PRELIMINARY SKETCHES, ELKS' CLUB, SCHENECTADY, N. Y.

Beverly S. King, Architect.

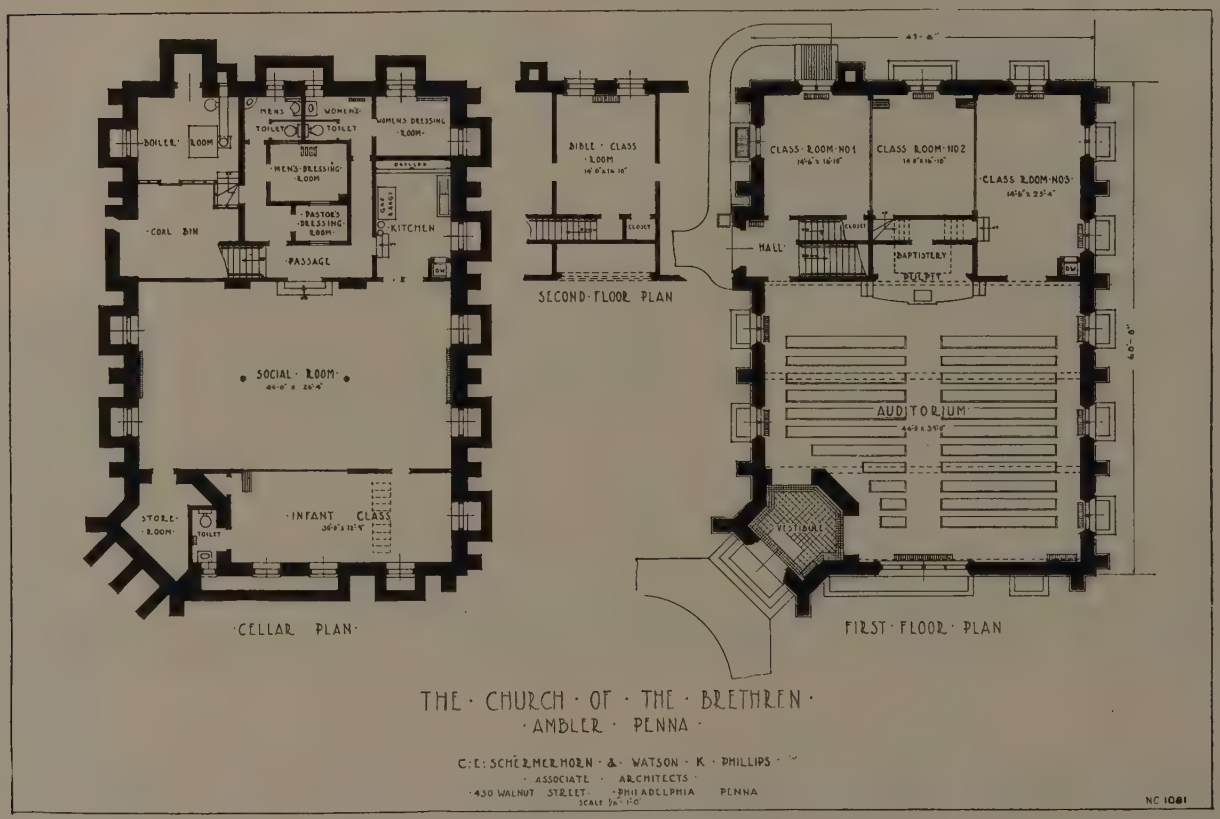
BRETHREN CHURCH, AMBLER, PA.

C. E. Schermerhorn and Watson K. Phillips, Associate Architects.

Completed in 1923 at a cost of $42,000, or 33 cents per cubic foot. Chestnut Hill stone was used in the construction. The floor of the vestibule has been covered with hand-made Moravian tiles. All of the windows are glazed with amber-tinted cathedral glass. The church auditorium seats 225. The Sunday-school portion is separated from the church auditorium. The baptistry is so arranged that a candidate may enter the water before being seen from the auditorium.

A social room for church suppers, fairs, amateur theatricals, etc., occupies most of the basement. Adjoining is a well-equipped kitchen. The infant class is also placed in the basement, where its activities will not interfere with the other classes. A private lavatory is provided for this classroom. Toilet and dressing-rooms have also been placed in the basement.

In order to insure quietude the Bible classroom has been placed in the rear of the second floor.


MENS TOILET
WOMENS TOILET
WOMENS DRESSING ROOM
BOILER ROOM
MENS DRESSING ROOM
PASTORS DRESSING ROOM
KITCHEN
COAL BIN
PASSAGE
SOCIAL ROOM
STORE ROOM
TOILET
INFANT CLASS
CELLAR PLAN
BIBLE CLASS ROOM
CLOSET
SECOND FLOOR PLAN
CLASS ROOM NO1
CLASS ROOM NO2
CLASS ROOM NO3
HALL
BAPTISTERY
PULPIT
AUDITORIUM
VESTIBULE
FIRST FLOOR PLAN
THE CHURCH OF THE BRETHREN
AMBLER PENNA
C.E. SCHERMERHORN & WATSON K PHILLIPS
ASSOCIATE ARCHITECTS
430 WALNUT STREET PHILADELPHIA PENNA
NC 1081

ST. ANDREW M. E. CHURCH AND SUNDAY-SCHOOL, PHILADELPHIA, PA.

C. E. Schermerhorn and Watson K. Phillips, Associate Architects.

The original church was erected in 1908 at a cost of $38,000, or 18 cents per cubic foot. At the same time a temporary frame chapel was erected. The congregation has grown so rapidly in the last few years that more and better facilities had to be provided.

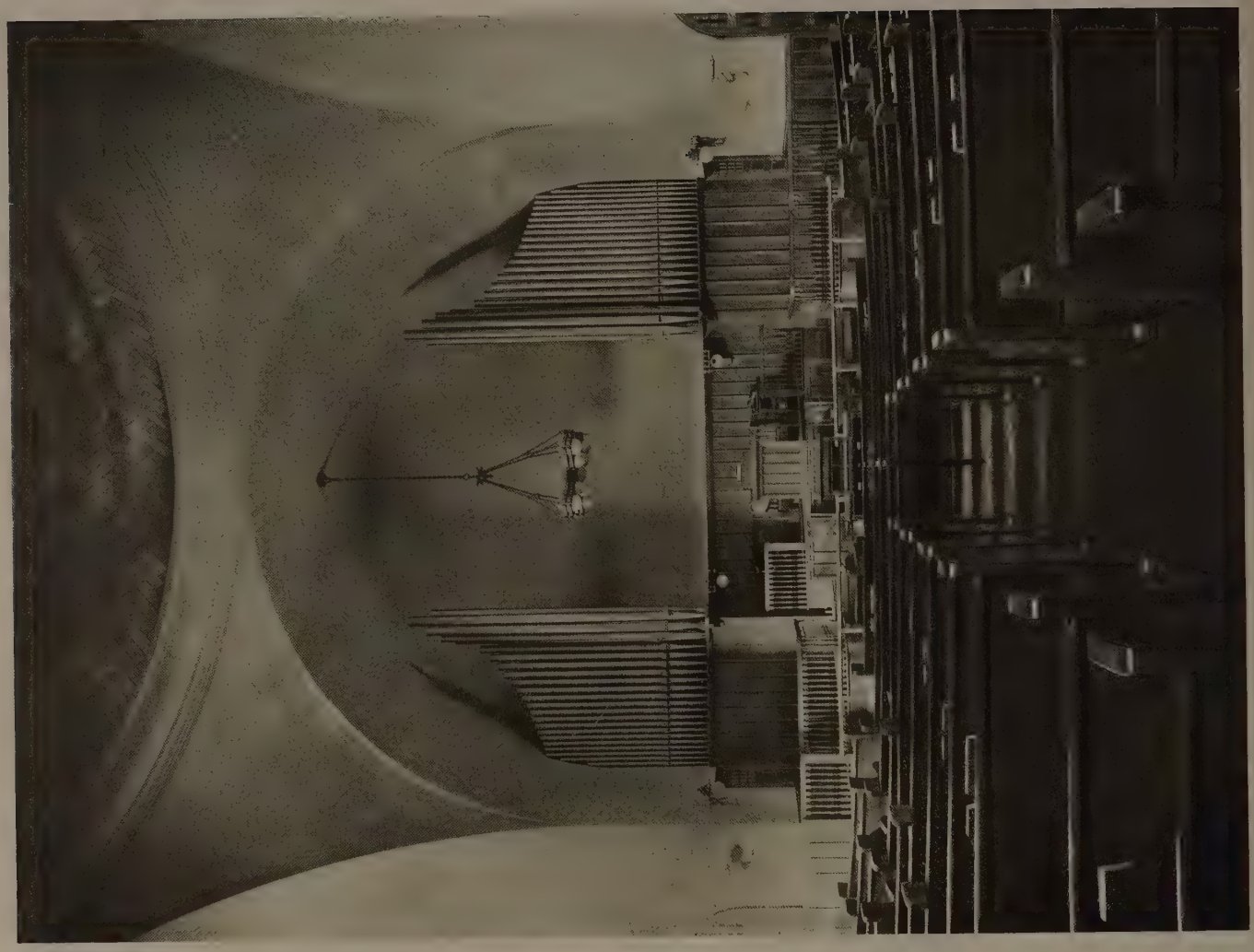
The Sunday-school addition which has just been completed was erected in memory of Elizabeth Townsend Schermerhorn, a former active member of the congregation. The cost of the addition was about $70,000, or 45 cents per cubic foot.

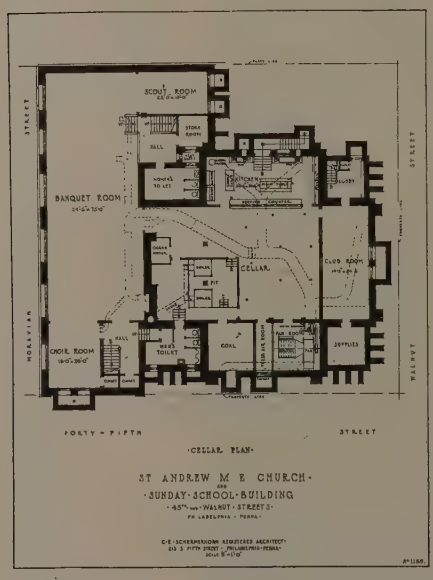
The church has been designed along Spanish mission lines, using the old Southern California and Mexican missions as the motif. The Sunday-school addition has been designed to harmonize with the original church.

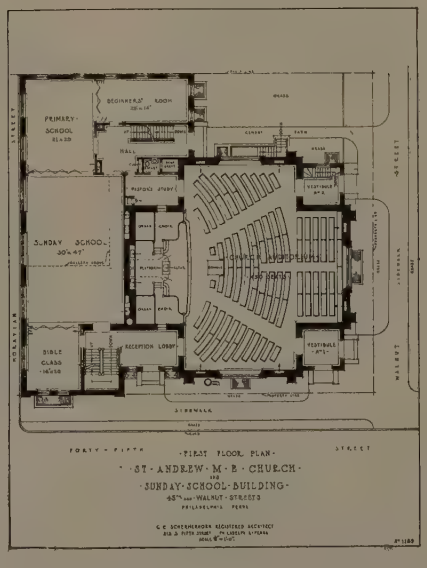
The first and second stories are used for Sunday-school purposes, guild room, ladies' aid, pastor's study, etc.

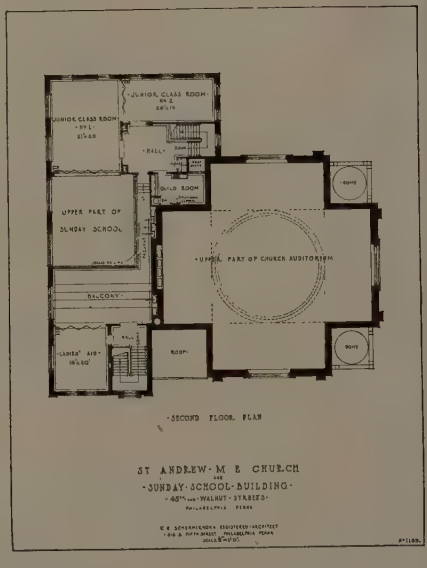
A large banquet-room occupies most of the basement. The kitchen is large and equipped with hotel ranges, steam table, service counter, sinks, automatic gas water-heater, etc. The equipment and arrangement is such that a large number of persons may be fed at one time.

The church auditorium and main Sunday-school rooms are warmed and ventilated by a split steam system by means of which a constant supply of warmed fresh air is maintained.









ST. ANDREW M. E. CHURCH AND SUNDAY-SCHOOL, PHILADELPHIA, PA.

C. E. Schermerhorn and Watson K. Phillips, Associate Architects.

The New World Builders

By H. P. Allen

"THE book will kill the building."

Victor Hugo, apostle of democracy, and prophet of the achievements that are born of the common people and rise from them as the race struggles with its destiny, puts these words in the mouth of a mediæval ecclesiast who fears the order that is to come.

As Hugo paints the picture, the archdeacon of Josas sits in a cell overlooking Notre Dame de Paris, a printed book in his hand. With his friend, Jacques Cocitier, court favorite and dabbler in alchemy, and a visitor who chooses to call himself Father Tourangeau; but who is really none less than King Louis XI of France, the gloomy prelate muses, and musing he prophesies. When he says that the book will kil the building, he means that architecture, whereby man has heretofore expressed his thoughts, his prayers, his longings, will be supplanted by the ubiquity of a new medium of expression—the printed book. Hugo goes on to show that nothing really distinctive had been developed in architecture since the mediæval craftsmen covered Europe with their prayers in stone.

Victor Hugo died in 1885. That was in a period when art and architecture were in the do drums—the reign of the Spencerian flourish, the jig-saw, the Mansard roof, the cast-iron pillar—fanciful and meaningless inanity. Even the graceful, clean types of the eighteenth century printers had been displaced by letters loaded with senseless scrolls; no two lines alike on a title-page. Victor Hugo had cause to mourn.

Had Hugo lived to the dawn of the nineteenth century, he would have witnessed some improvement. He would have seen a new architecture being born in the New World —the first glimmerings of an art as distinctive, as expressive of a purpose and of the soul of a people as were ever the Gothic cathedrals.

That architecture is growing and developing in our cities to-day. It is coming to symbolize, not only the epic of commerce, but that of the twin of trade—industry. It is conforming itself to the need for expression of that which goes to make-up the greatness of America, and it does not embody the grossness of mere seeking after wealth; but is shaping itself to symbolize the driving force and power of the empire builders—the Hills, the Harrimans, the Edisons, the Henry Fords—the men who have been busy creating our new mechanical civilization.

Along with an entirely new expression of man's aspirations, the skyscraper, there is taking form another new child of the bra n of man, a type of building that symbolizes power. Life to-day is predicated on mechanical forces that do easily the work of many men. Is it not fitting that the buildings where these mighty forces are gendered should begin to take on a meaningless form? Architecture is void unless it expresses something; nothing without it is the embodiment of a useful thought.

In the early days of electrical development at Niagara Falls, the Toronto Power Company built a generating station in Queen Victoria Niagara park on the Canadian side of the river. It had to be a seemly building—one in keeping with the idea of a park as a show place. It has pillars like a Greek temple, or rather more like Nero's Golden House in Rome. It is a handsome building, but absolutely meaningless. It might be a bank from the look of it. Banks have much money and feel that they must make a show with the structures they occupy, but they have not been happy in the results they have attained.

The banks have been copiers. They have adopted Greek temples and Roman porticoes. They have worked out an order of architecture that has come to symbolize the power of finance, but they have not done so in an original manner. There is nothing in the form of the buildings that suggests their purpose; Ionic and Doric and Corinthian columns are a mere habit and the people have come to expect a temple of Mammon wherever they see a classical façade. Such embellishments suggest a bank. Perhaps money, from its very nature disdaining the new and original, could find no better expression for its soul. Composite capitals are handsome, but they are no more in tune with the idea of a bank than as if the men of finance had welcomed the Gothic or the Byzantine instead of adopting the Græco-Roman.

The result has been that we have many a Pantheon, many a temple of Diana in our American cities, nestling close to buildings of an order of architecture that is indigenous and individual to the New World; that is our contribution to architecture, as meaningful and spontaneous as was the Gothic—the skyscraper. Nor need we travel far from those towering canyons we call our city streets to find America's soul expressing itself in other forms that are original and truly symbolic—the newer factories and the giant power-houses.

The first tall buildings were ugly enough—mere stone-shelled steel boxes with windows and elevators. They were rectangular, devoid of grace and lacking of meaning. Groping architects of the earlier skyscrapers sought motifs and tried out many before they hit on buildings with a soul like the Woolworth tower in New York or the Tribune building in Chicago.

For a while the builders were cursed by the facility with which iron could be cast in forms that ran to the fanciful. Those were the days when pillars of gray iron helped support brick and mortar and sheet-iron cornices in the six to ten-story buildings that sprang up in American cities in the 70's and 80's. Nor were the first steel-framed buildings much better in their outward expression. The architects had not yet learned how to handle window masses and build grace in simple lines. They were yet to realize that the introduction of a steel under-frame, carrying the weight of the structure, removed the limitations that mechanics imposed on the builders of antiquity.

The mediæval builder solved his problem of attaining height by means of the flying buttress and the pointed arch. By so doing he had ventured into new realms of expression that neither the Greek, with his graceful columns, nor the Roman, with his semispherical dome and his round vaulting, could possibly know. They were chained to their solid walls and the inexorable geometry of the circle. If a wall were to be high, it must be made ungracefully thick; likewise columns can only attain certain dimensions without losing their beauty. These limitations the Gothic mode removes; it adds to the richness of the material with which the builder can work, and gives him an infinity of variety that the Greek and Roman orders could never know.

A steel frame for a building is as much a step in advance in architecture as the flying buttress, and for the same reason. The graceful half arches of stone which the cathedral builders used to strengthen their walls enabled them to build higher without danger of attaining a result too massive and consequently clumsy. To an even greater extent the steel underframe does the same thing. It removes all limitations as to height and leaves the architect free to express himself unhampered. He can build his towers of commerce tall and still put dainty grace into them.

To a remarkable extent he is doing so. A look at New York's sky-line is proof enough. It is no longer a jostling of hideous rectangles, limned with windows, like boxes set on end, with here and there a spire or a dome. Many of the boxes are still there, but dominating them, like the diapason of a cathedral organ, are the skyscrapers, now taking on a form that serves both utility and art. The result is distinctively American. The New World has brought forth a new order of architecture, as vital as the Gothic or the classical modes. Just as the Gothic craftsman took the column from his elder brother builders and made it his own, so has the twentieth century architect borrowed from all that has gone before. But he has recombined these elements and added others in a way that is distinctive enough to call his work new.

Like the skyscraper, the factory started out by being extremely hideous. There was much wall and little window; absolute rectangularity of form. Where a corrugated iron shed would do, it was good enough. A smoke-stack was a smoke-stack; it needed no grace. If the builder felt the urge for beauty, that was easily satisfied by inserting colored bricks in geometric patterns, or a bit of gingerbread work —that hideous disease that blighted everything America built in the fancy 70's and the worse 80's—went in here and there. Mostly factories went unadorned and unconsidered. Sometimes a tower was added to shelter a water-tank, but it only made matters worse in the great majority of cases.

Then, too, when the factories first began to spring up, steel and reinforced concrete were not employed in their construction. Walls of solid brick—too solid to allow enough windows to light their interiors—limited the architect. Cast-iron pillars, row on row, supported the wooden floors inside —there was little opportunity for the builder, even had the mill-owner felt inclined to answer the need for beauty in the mad race to keep down overhead and meet the keen competition which has been so large a factor in bringing industry to the high plane it occupies in the New World.

But steel, which gave birth to the skyscraper and allowed it to be graceful while serving its purpose of making the most of real estate that has become well-nigh priceless, has also wrought a change in the factory. Steel channel bars, cunningly joined together, will hold glass. Thus window spaces are no longer dominated by the feeble strength of the comparatively small-sectioned wooden bars that had held the panes before steel sash began to be employed. Steel frames did away with the necessity of thick walls; steel rods, embedded in concrete, served the same purpose. The window spaces could be more frequent; the unit light openings became larger. Steel and concrete had set the architect free; he could put grace into his factory buildings and break their monotonous rectangularity without imposing an overwhelming burden of added cost on the owner.

To-day he is doing so. The newer industrial plants have some architectural pretensions. Even so large a workshop as the Fords are building in River Rouge, near Detroit, has a claim to dignity of line. There are acres and acres of buildings, sheltering automobile body factories, glassworks, cotton-looms, and what not. There are blast furnaces; giant devices for unloading ore. There are coke ovens. Dominating all are the stacks of the power-house where in one day there will be generated electrical energy equivalent to 320,000 horses. Yet there is an architectural unity about the plant. It is not ugly with the bald, jumbled hideousness of a typical Pittsburgh steelworks, which must wait the coming of night to take on anything of beauty. The Ford plant can be seen in the daytime and admired as a sample of American industrial architecture of the newer sort—art because it expresses its purpose and has a meaning.

The modern city must have electric power. The business of supplying it was born in the old type of workshop—dingy, devoid of light, noisome. The first dynamos were driven by flapping belts, which required room. Engines and boilers were kept on the ground level on account of their weight; as the central station grew it spread out like a shed. But engines and dynamos grew heavier, the turbine was developed, and the belt was discarded. That forced height in the buildings that housed the larger units, because there must be travelling cranes to serve the massive machines. Likewise engineers found that coal could be handled to better advantage and that boilers worked more economically when the boiler-room was several stories removed from the ground. Moreover, the steel smoke-stack which supports itself without guy wires was developed to replace the brick chimneys, and the sheet-iron affairs which required a multitude of wires to hold them up right. Economic and engineering necessity gave the architect something to work with when he designed a power-house, and he has not been slow to take advantage of it.

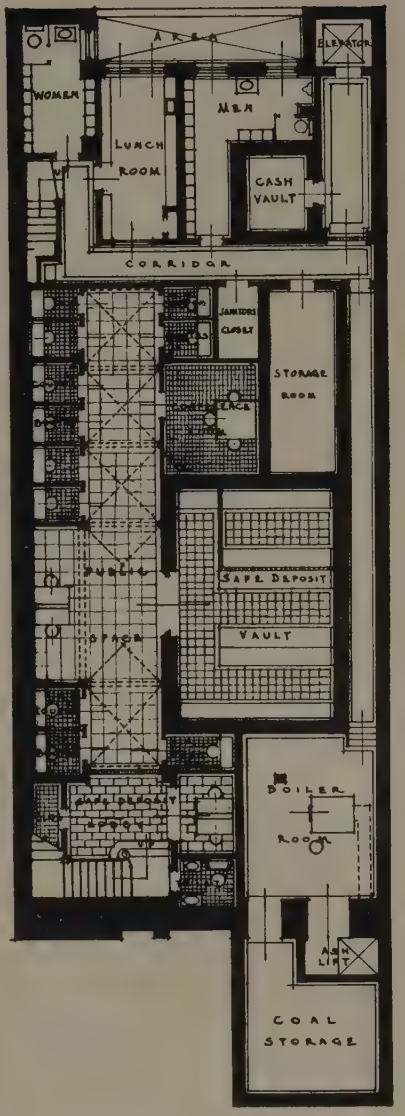
The result has been that the newer central stations are graceful. Even so utilitarian a thing as a coal hoist is handled in such a way as to give tone to the ensemble. Simple, straight lines combine to remove completely from the structures the rectangularity which architecture must avoid to be art. Dominating are the tall steel stacks, now gracefully proportioned and lending the final touch which transforms the utilitarian power-house into a thing of beauty. No longer is it a shed, filled with brawling high-speed engines, with murk and dust and soot the Plutonian embellishments. It is a temple of power, clean and dignified, and as well adapted to its purpose as the Acropolis or the Cathedral of Rheims.

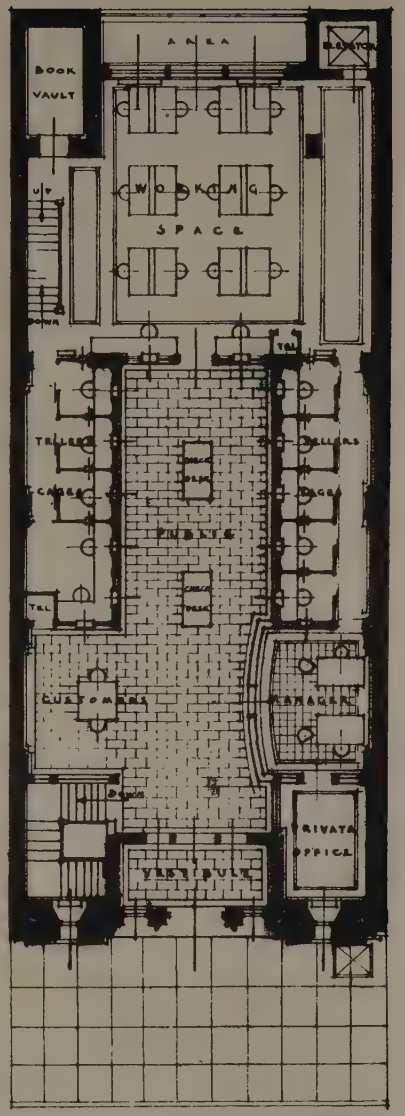
Such is the soul of the new American architecture, as embodied in the skyscraper, the factory, and the power-house. Commerce and industry may not have consciously felt any æsthetic longings, but the very logic of events has provided the means for the expression of beauty.

The pagan mythology found its architectural symbol in the Greek temple. It was free and sensuous; like the belief that underlay it, a naïve representation of an idea that was not very deep nor held out much hope save in sheer beauty. The soul of man, struggling out of barbarian darkness into a new concept of God as the universal father, yet held back by childlike superstition, found its stupendous hieroglyph in the Gothic cathedral of the Middle Ages. And now is America expressing her dynamic spirit in a fashion that is as new as the concept that is behind it—mechanical civilization, with vast forces serving man by relieving him of drudgery and multiplying his power to create wealth and add to comforts.

The spirit of every age manifests itself finally in some sort of beauty, and that of the new industrialism is beginning to be evident in America's cities. Some day they will cease being ugly.

BANK OF THE MANHATTAN CO., NOSTRAND AVENUE, BROOKLYN, N. Y.





Morrell Smith, Architect.

A steel frame for a building is as much a step in advance in architecture as the flying buttress, and for the same reason. The graceful half arches of stone which the cathedral builders used to strengthen their walls enabled them to build higher without danger of attaining a result too massive and consequently clumsy. To an even greater extent the steel underframe does the same thing. It removes all limitations as to height and leaves the architect free to express himself unhampered. He can build his towers of commerce tall and still put dainty grace into them.

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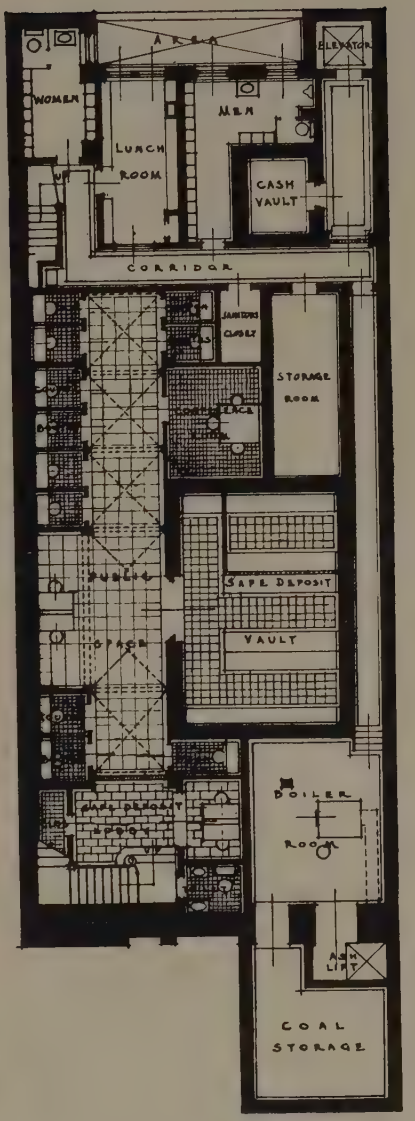
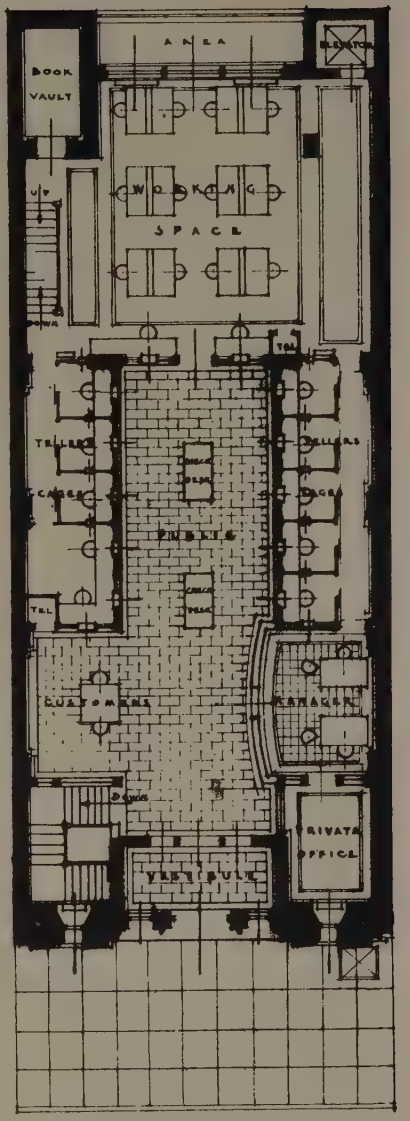
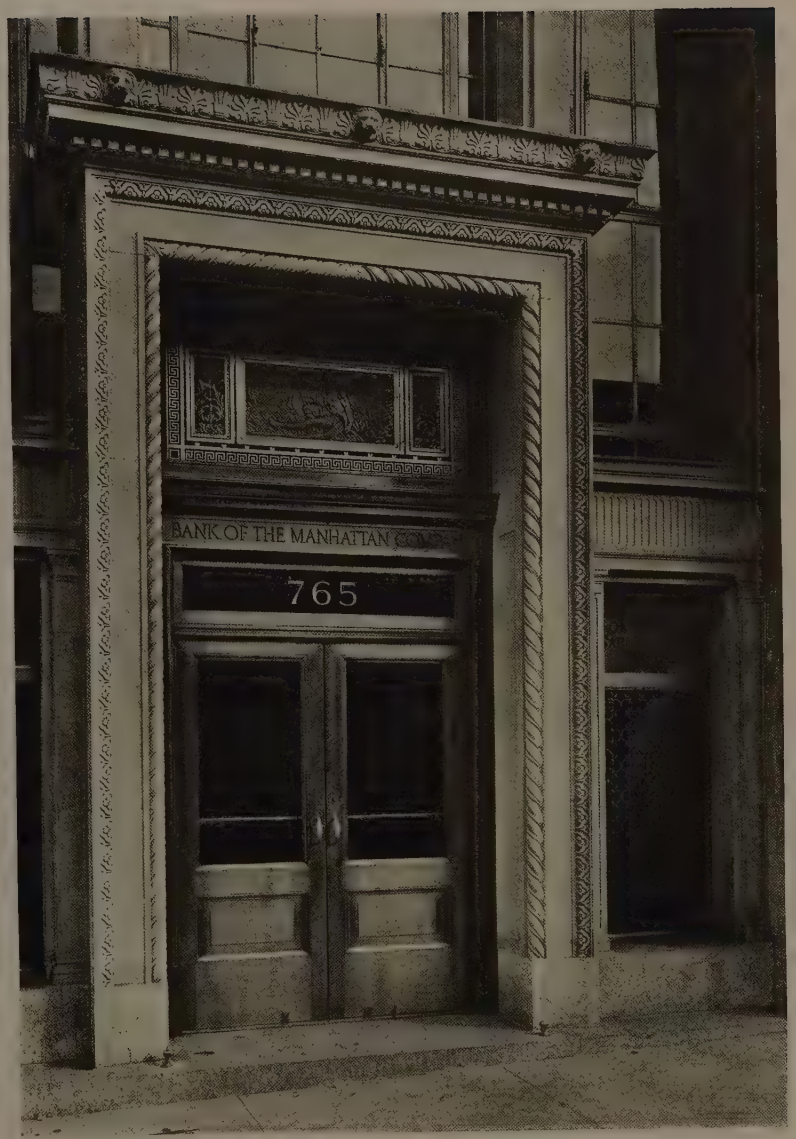




Morrell Smith, Architect.



ENTRANCE DETAIL.

BANKING-ROOM.

Morrell Smith, Architect.

BANK OF THE MANHATTAN CO., NOSTRAND AVENUE, BROOKLYN, N. Y.

John Russell Pope Appointed Architect of the New York State Roosevelt Memorial

General Elevation.

AFTER a State-wide competition beginning December last, the trustees of the New York State Roosevelt Memorial selected Mr. John Russell Pope, of New York City, to prepare the plans for the great memorial to be erected to the memory of Theodore Roosevelt on Central Park West and Manhattan Square.

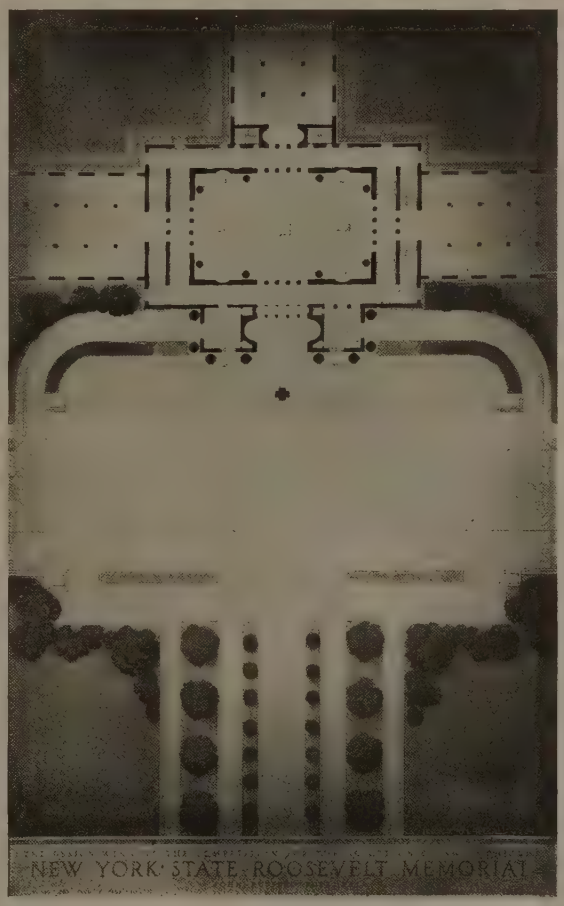
The trustees in their deliberations considered seventeen architects who were recommended to them by a commission named by the governor and legislature according to an Act creating a commission for this purpose in 1920, to compete for this great honor in designing, perhaps, the most important building which the State has ever erected, because of the fact that it not only will attract the citizens of the State and the nation, but will become of world-wide interest.

Owing to various causes and declinations to compete, the list finally invited by the trustees to compete narrowed down to the following eight firms: J. H. Freedlander, New York City; Gordon & Kaelber, Rochester, N. Y.; Edw. B. Green & Son, Buffalo, N. Y.; Helmle & Corbett, New York City; H. V. B. Magonigle, New York City; John Russell Pope, New York City; Trowbridge & Livingston, New York City; York & Sawyer, New York City.

Mr. Arnold W. Brunner was selected by the trustees to act as a professional adviser, and began the preparation of the programme of competition according to the rules of the American Institute of Architects laid down for anonymous competition. On the death of Mr. Brunner, Mr. Charles Butler was selected to serve with the firm of Arnold Brunner in the capacity of professional adviser. Approximately two months was allowed to the architects for the preparation of their plans. Their submitted design was to demonstrate the ability of the competitor to handle this architectural problem, which was generally acknowledged to be a very difficult one.

The trustees selected according to the programme as a professional juror, Mr. William Richard Kendall, of the firm of McKim, Mead & White, and the competing architects

Cross Section.



Main Floor Plan.

Longitudinal Section.

selected Mr. Milton B. Medary, Jr., as their representative.

The jury that passed upon the designs was as follows: Henry Fairfield Osborn, chairman of the board of trustees; Peter D. Kiernan, of Albany; Mrs. Douglas R. Robinson, of New York; Chauncey J. Hamlin, of Buffalo; Charles W. Flint, chancellor of Syracuse University; Mrs. William H. Good, of Brooklyn; architect, Mr. William Richard Kendall; architect, Mr. Milton B. Medary, Jr., who met in the office of the trustees in the American Museum of Natural History on Monday June 1, and Tuesday, June 2, for the consideration of the eight anonymous plans which were submitted.

The design should symbolize the scientific, educational, outdoor, and exploration aspects of Theodore Roosevelt's life rather than the political and literary.

The design should be consistent with the dignity of the Empire State, and reflect the national and international influence of Theodore Roosevelt.

The memorial should be harmonious with and embody the ideals, purposes and plans of the American Museum of Natural History to which Theodore Roosevelt devoted the early and closing years of his life.

The memorial should provide not only for visitors from the city and the State, but should be so planned that it would also become an integral part of the school and public educational system of the State, and likewise form an extension to the educational work of the American Museum of Natural History in the city and in the State.

Stone

By David B. Emerson

Second Article

SANDSTONES are also aqueous rocks, and are of sedimentary formation. They are composed of rounded and angular grains of sand, compacted and cemented together. The cementing material differing, being either silica, carbonate of lime, an iron oxide or clayey matter. The sand is generally pure quartz. Sandstones are found in Massachusetts and Connecticut, in the valley of the Connecticut River, in New York, New Jersey, Pennsylvania, Ohio, Michigan, Wisconsin, Minnesota, and some of the Rocky Mountain States. The colors of sandstone include brown, red, pink, yellow, buff, gray, drab, and blue. The Connecticut brown sandstone was one of the first sandstones to be quarried and used in this country, and it was used extensively in New York City during the nineteenth century, so much so that the brownstone front of those days was synonymous with prosperity. This stone is dark brown in color, of a fine texture, and is a distinctly laminated formation. It is a very sound, durable stone, but on account of its laminated structure, it must be laid on its natural bed, that is, with the laminations running horizontally. The great mistake made by the large majority of the early users of this stone, was the setting it with the beds running vertically, causing the stone to shell off very badly, which gave a very bad name to all brownstones, something which was entirely undeserved.

The Longmeadow stone quarried at East Longmeadow, near Springfield, Mass., is a reddish-brown sandstone, with no apparent bed, so may be cut in any direction. This stone in the past enjoyed a well-deserved popularity. It was used for the trim on Trinity Church, Boston, and has stood splendidly for fifty years. H. H. Richardson made extensive use of it on college buildings, public libraries, and railroad stations. It was used for the stonework of the Waldorf Hotel, New York City, built in 1892; and a very recent example of its use is the Chemistry Laboratory at Yale University.

A very hard, red sandstone is quarried at Potsdam, N. Y. This stone runs in three shades, chocolate, brick-red, and reddish-cream. It was used on the Cathedral of All Saints, at Albany, N. Y.

The Ohio sandstones are probably the most popular of all the sandstones quarried in this country. The colors are gray, yellow, buff, and drab. Briar Hill stone is quarried at Glenmont, and runs in golden buff, light variegated, and dark variegated. This stone works very well, in fact, it is only excelled in its working qualities by a few of the limestones. It was used on the Harkness Quadrangle, at Yale University, on the Bowery Savings Bank Building, New York City, in conjunction with Buff Mountain stone, another of the buff Ohio sandstones, and on the Federal Reserve Bank Building, New York, in conjunction with Buff Mountain stone and buff Indiana limestone.

Buckeye Grey, sometimes called Amherst stone, is quarried at Amherst, Ohio. It is a fine-grained gray sandstone. Waverly sandstone is a light-drab sandstone, quarried in southern Ohio, and it has been extensively used for public and private buildings in Cincinnati.

Dunville stone is a yellowish-buff sandstone, quarried at Dunville, Wis. It is an excellent working stone, with a fine texture. The beautiful reredos in St. Thomas's Church, New York, which is probably the finest piece of stonework ever executed in this country, is built of this stone.

Kettle River stone is a salmon-colored sandstone which is quarried at Banning, Minn., and has been quite extensively used in the Northwest.

At one time quite a little sandstone was imported into this country, coming from Corsehill, Dumfriesshire, Scotland. This stone was a fine-grained stone, bright red in color, and it was called Carlisle stone because it was shipped from that port.

The New York bluestones, which are a hard blue sandstone, are used extensively for wall copings, window and door-sills, flagging, and for stair treads.

The use of variegated stone is becoming more general of late years, and the results are certainly very pleasing, as may be seen by those who are fortunate enough to be able to see the Bowery Savings Bank and the Federal Reserve Bank in New York City, previously mentioned. For many years after our architects graduated from the Philadelphia face brick, with "paper" joints, they still clung tenaciously to uniform color and a uniform texture in their stone-work, which was about as uninteresting as if it had been given a fresh coat of paint, but thanks to some of the bolder spirits in the architectural profession we have cast that off with some of the rest of our old fallacies.

Marble is one of the most valuable of our building stones and is used very extensively, but as it was treated at length in a previous article, there is no need for discussing it here.

Conglomerates are a fragmentary stone composed of pebbles held together with a paste, and are commonly called pudding stone. On account of their structure they cannot be dressed, so they are only used on rough work. The largest deposits of conglomerates are in Dorchester, Roxbury, Brookline, and the towns to the south and west of Boston. This stone has a greenish-gray ground mass or paste, and is full of pebbles of all sizes, up to several inches in diameter. It was used largely in the past as a facing stone, with cut stone trim, and quite a number of large churches in Boston were built from it, but of late years it has been but little used.

Diabases are a crystalline granular rock, the colors running from a greenish-gray, through dark gray to nearly black. It is a hard stone with a compact texture and a lack of definite rift, which makes it difficult to work. On account of its formation it is quite generally known as trap rock. It is quarried to some extent in Maine, Pennsylvania, and Massachusetts; the largest quarries are in the Palisades, in New Jersey. This stone has been used quite extensively in and around Jersey City, and one of the buildings at Stevens Institute, Hoboken, was built of it. On account of its sombre color it is best used in combination with lighter stones, such as limestones, gray or buff sandstones or marbles. Some of the Massachusetts diabases have been dressed and used for monumental work. Crushed trap-rock is one of the very best concrete aggregates obtainable.

Serpentines are a hydrous silicate of magnesia. The prevailing colors are green and a light-yellowish color, and the greens fade on exposure to a lighter shade of green. The verde-antiques, which are classed as marbles, are serpentines. The principal quarries from which this stone is obtained are in Milford, Conn., and Chester, Pa.

Some of the buildings at the University of Pennsylvania, the Academy of Science, some twenty churches and a number of residences in Philadelphia were built of Pennsylvania serpentine, and H. H. Richardson made some use of it in conjunction with Longmeadow sandstone, notably on the Converse Memorial Library, Malden, Mass.

Slates are argillaceous fragmental rocks, that is, they

are a clay formation, originating as deposits of silt on ancient sea bottoms. They have distinct planes of cleavage, and can be split into very thin sheets. Slate is quarried in Maine, Vermont, New York, Pennsylvania, Maryland, Virginia, Georgia, Arkansas, and California, the principal quarries being in Vermont and Pennsylvania. The colors of slate are black, blue, gray, green, purple, and red. Although the most general use of slate is as a roofing material, it has quite a few other uses in building; slate flagging for floors is used quite a little, especially in churches. It is also used for treads and risers in staircases, door and window-sills, wall copings, water-closet enclosures, school blackboards, and for electrical switchboards and panels it is unequalled by any other material.

After the selection of the stone which is to be used for any particular purpose, the next great consideration is the selection of the proper method of dressing the stone, from both the æsthetic and the practical standpoints. There are numerous surface finishes which are given to the various stones used in building, the simplest finish being the rock-face, which is obtained by taking the rough blocks as they come from the quarry, squaring up the edges, and then pitching the face of the stone back from the edges; that is, breaking off the stone with a wide-edged chisel. This finish may be given to practically every kind of stone, and during the period of the Richardsonian Romanesque, it had an enormous vogue, brown sandstone being the favorite stone of that time.

The various surface finishes given to granites are the rock-face already mentioned, pointed, pean-hammered, bush-hammered, rubbed, honed, and polished. Pointing is the taking off the rough face of the stone with what is known as a point, which is a four-sided, tapered chisel, ending in a point. Pointing is classified as coarse, medium, and fine. In coarse pointing the indentations are from one inch to one and a quarter inches apart. In medium pointing they are from five-eighths of an inch to three-quarters of an inch apart, and in fine pointing three-eighths of an inch apart. This finish is used almost exclusively on the hard stones.

Pean-hammering is done by hammering the surface of the stone (which has been taken out of wind and reduced to an approximately level surface by pointing) with a hammer having two cutting edges, called a pean hammer, and sometimes called an ax. This leaves the surface of the stone fairly smooth, showing the cuts of the pean hammer. Bush-hammering is a finer finish than pean-hammering, and it is done with what is known as a patent bush hammer, which is a double-headed hammer with iron jaws seven-eighths of an inch apart, into which are bolted four, six, eight, ten, or twelve steel blades, according to the fineness of the finish desired. The surface of the stone after being pean-hammered is then hammered with the bush hammer, which gives it a uniformly corrugated surface. Four, six, and eight cut work is most generally used, although government specifications at one time called for ten cut work.

A great number of the younger members of the architectural profession believe that four, six, and eight cut work means four, six, or eight cuts to the inch; this is incorrect, as the jaws in the hammer are only seven-eighths of an inch apart, which makes four cut work nearly five cuts to the inch, and increases the finer cuts correspondingly.

Rubbed finish consists of grinding the pointed or sawn surface of the stone under a polishing mill, using carborundum, chilled shot, crushed steel, or other abrasive, and rubbing until the surface of the stone is smooth, showing no tool marks. Honed finish is obtained by a further rubbing of the surface until it is dead smooth and practically free from scratches. All small surfaces and mouldings are rubbed and honed by hand. Polishing is done by glossing the surface of the stone under a heavy felt-coated wheel, after it has been previously rubbed and honed.

The finishes which are given to sandstones and limestones are rock-faced, rough-sawed, tooled, drove, bush-hammered, crandalled, and rubbed. Rock-faced work in sandstones and limestones is done in the same manner as described for granites and other hard stones, except that in the cutting of the softer stones a wood mallet is generally used, whereas in the cutting of the hard stones an iron mallet is always used. Rough-sawed stone is the most recent development of the stone industry, it having been used for a very few years to any extent. It is the stone as it comes from the gang saws, limestones being prepared for dressing by sawing into slabs of varying thickness, and the resultant saw marks remain on the face of the rough-sawed stone. Some very charming effects have been obtained recently by the use of rough-sawed, variegated limestones. Tooled work is done with a flat chisel, giving a series of lines on the face of the stone, and it is used for finishing both limestones and sandstones.

Drove work consists of cutting the face of the stone with a narrow chisel, giving a series of broken lines. Bush-hammering, as done to hard limestones and sandstones, differs from the bush-hammering done to granites, in that the bush hammer is a solid hammer with square ends cut in pyramidal points, and it gives a spotted finish to the surface of the stone, in place of the corrugations produced by the patent bush hammer. Crandalling is a finish which is applied exclusively to sandstones. It is done with what is known as a crandall, which consists of a slotted iron handle, about twenty inches long, into which are fixed ten double-headed points, one-quarter of an inch square, set in line, at right angles to the handle, like the blade of a two-edged ax; this produces a picked surface. Rubbed and honed finishes are produced with limestones and sandstones in the same manner as with granites. Much of the work of cutting and finishing of stone is now done by machinery, but the results are the same as those obtained by the hand processes which have been described, except that a more regular and mechanical result is obtained by machine-cutting and dressing than by hand work, but the cost is naturally decreased, whilst the speed of production is greatly increased.

It will not be amiss in drawing this article to a close to give a few words of caution on the use of stone, and mention some of the errors which are to be avoided.

Stone-work should always be so designed that rain-water will drip off, and not run down the face of the stone, causing discolorations. Stone, particularly sandstones and limestones, should be thoroughly seasoned before using, to get out the quarry sap. Portland cement should never be used in the mortar for setting stone; always use a non-staining cement, of which there are several brands at present on the market, both domestic and imported. Care should be taken not to use too much water in the setting mortar, as an excess of water in the mortar will cause efflorescence on the surface of the stone. Salt water should never be used in the setting mortar, as it dissolves the organic matter in the stone. In cleaning stone-work the use of acids of any kind, or wire brushes, should never be allowed, as they are two of the most injurious agents known, and every stone cleaner will try to use a wire brush if he is not watched very carefully. Another destructive agent, particularly when used on limestones, is the sand blast, as it destroys the natural patina which the stone acquires from the atmosphere, and which should be preserved.

C. E. Schermerhorn

C. E. SCHERMERHORN, who died May 16, 1925, was born in Philadelphia, a lineal descendant of James Jacob Schermerhorn, who settled in New York in 1636.

He attended the public schools, and after leaving the Central High School spent a year travelling in Europe furthering his education. He then entered the office of Stephen Decatur Button, one of Philadelphia's well-known architects of twoscore years ago. Upon the death of Mr. Button he succeeded to the practice.

Mr. Schermerhorn was retained as architect for a number of important public structures and numerous private residences, many of them for well-known clients.

Some years ago Mr. Schermerhorn formed an association with Watson K. Phillips under the firm name of Schermerhorn & Phillips, associate architects. Together they designed a number of public-school buildings, churches, private residences, etc.

He wrote many articles for magazines and newspapers which were of particular interest to home-builders. He was one of the first architects to broadcast talks on architectural and building subjects over the radio. His brochure, "Services of an Architect," was broadcast from over thirty radio stations throughout the country, and was published in many architectural, trade, and home magazines.

During the World War he was attached to the Military Intelligence Section, Plant Protection Division of the General Staff of the U. S. Army.

Mr. Schermerhorn had a wide acquaintance and a host of friends. He was a member of many patriotic and fraternal organizations, including the Union League, Crescent Lodge No. 493 F. and A. M., LuLu Temple, A. A. O. N. M. S., Pennsylvania Society of Sons of the Revolution, Founders and Patriots of America, Colonial Society of Pennsylvania, American Institute of Architects, Philadelphia Chapter A. I. A., T-Square Club, Second Troop Philadelphia City Cavalry, N. G. P., and the Riverton Yacht Club. He was also a member of the Fire Prevention Committee of the American Institute of Architects.

Mr. Schermerhorn leaves surviving him his widow Sara Welch Schermerhorn, but no children, and a brother, Frank Earle Schermerhorn, an attorney.

Watson K. Phillips, his associate for twenty-five years, will continue the practice at 213 South 5th Street, Philadelphia.

Donn Barber

WHILE it was announced at the recent convention of the American Institute of Architects, that Mr. Barber was ill, his death, on May 29, came as a distinct shock to all who knew him. He was a man of versatile talents and a power for good in the profession which he served with so much distinction.

He was the designer of many notable buildings in this country, and was only recently elected President of the Architectural League of New York. He was fifty-three years old.

Among the notable buildings designed by him were those of the Department of Justice, in Washington, for which his design was accepted over those of twenty competitors; the New York Cotton Exchange, the National Park Bank, the Lotus Club, the Central Branch of the Y. M. C. A. in this city, and the Travellers' Insurance Building, the Ætna Life Insurance Building, the Hartford Ætna National Bank Building, and the Connecticut State Library, in Hartford, Conn. Another building designed by him is that of The Hartford *Times*, which was built largely of the marble obtained from Doctor Charles H. Parkhurst's Madison Square Presbyterian Church, when the church was removed.

Mr. Barber's work on the great Broadway Temple will not be affected by his death. Doctor Christian F. Reisner says that his plans had been so thoroughly completed that they may be carried out by others.

Mr. Barber was a descendant of Thomas Barber, who came from England to Windsor, Conn., in 1634; of Moses Barber, an officer in the Revolution, and of Hiram Barber, an eminent surgeon and sanitarian of the Civil War.

He graduated from Yale in 1893.

Adopting architecture as his life-work, he took a special course at Columbia University, later entering the Ecole des Beaux Arts, in Paris, in 1895. In 1898 he received a diploma from the French Government, being the ninth American student to achieve that distinction, and also received nine official medals for his work in design. After extensive travels in Europe, he returned to America and entered the office of Carrere & Hastings, architects, of New York. After serving a thorough apprenticeship there and in the offices of Cass Gilbert, and Lord & Hewlett, he, in 1900, opened an office of his own in this city.

Mr. Barber was a member of the American Institute of Architects, the Architectural League of New York, the Society of Beaux Arts Architects (of which he was president in 1909–10), the National Sculpture Society, and the Société des Architects Diplomés par le Gouvernement, of Paris. He was also a member of the Century, Union, University, Players, American Yacht, Apawamis, Knollwood Country and Racquet and Tennis clubs.

In accordance with the provisions of the will of Mr. Barber, his architectural practice will be continued under the direction of his widow, Elsie Yandell Barber.

Mrs. Barber will have complete control of the office, continuing the work with the force that her husband trained and the co-operation of Henry A Erdmann and George A. Flanagan, and an advisory board of three architects.

Mrs. Barber has proved her executive ability as head of canteen work in the war and in other war and peace-time organizations. Her daughter, Mrs. Richard S. Hoffman, is studying architecture, and probably will go into the firm in a few years.

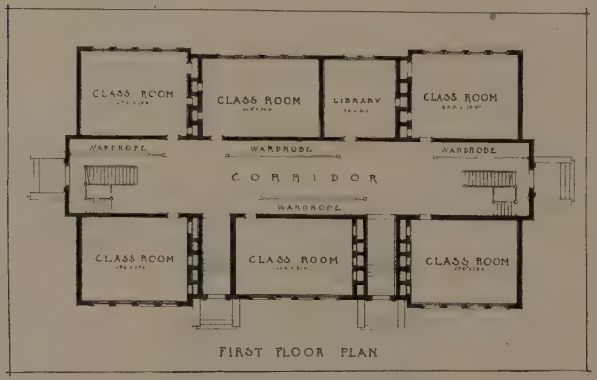
For the Betterment of Memorial Art

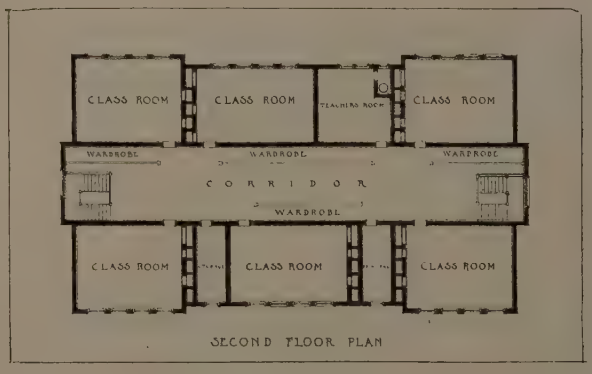
THE memorial design competition, inaugurated some months ago by the Vermont Marble Company, closed April 1. Among the 300-odd designs submitted were contributions from architects and designers in practically all parts of the country.

Charles A. Platt and John Oakman, of New York, Guy Lowell, of Boston, and C. C. Zantzinger, of Philadelphia, were the judges.

By a strange coincidence both the first prize of $400 and the second prize ($200) went to the same man—Alfred C. Cass, of New York. The third prize ($100) was also won by a New Yorker—Aaron A. Kiff. Seventeen men received honorable mention ($25) as follows:

Norman Issott, Omaha, Neb.; Edward F. Toney, Niles, Mich.; Pierre Lord, Chestnut Hills, Mass.; Phil. A. Moe, Rockford, Ill.; Merrit F. Farren, New York City; Clarence O. Morrison, Brooklyn, N. Y.; P. M. Torraca, Cincinnati, Ohio; C. B. Tandy, Denver, Colo.; James C. Green, New York City (twice); Melville Wood, Toronto, Ont.; Victor E. Johnson, Monroe, La.; Donald M. Douglas, New York City; H. A. Wieland, Buffalo, N. Y.; Emil Pozzi, Morristown, N. J.; (unsigned), St. Louis, Mo. (twice).





WILLIAM FRANCIS BARTLETT SCHOOL, PITTSFIELD, MASS. Peter F. McLaughlin, Architect.

The Stocking School

Henry H. Turner and V. E. Thebaud, Architects

THE new Stocking School is located at the north end of Stocking Street, Grand Rapids, Michigan, on a large plot of ground formerly the Stocking Homestead.

The location for school purposes is ideal. The grounds are ample for future expansion of the building, which was planned with this idea in mind.

The building is two stories high, having the first or ground story three steps above the grade. There is no basement, except sub-grade accommodations for heating apparatus and coal-storage. In the centre of the south front is the gymnasium, which also is used for community purposes as a social-centre room. To the east and west of this room are the main entrances, so arranged that the social-centre room may be used independently of the remainder of the building. On the exterior these entrances are marked by two towers. The western one is in line of the axis of Stocking Street. These towers serve a practical purpose in furnishing housing for ventilation fans.

Facing a formal garden formed out of a natural depression to the west of the building are the kindergarten and first-grade rooms, with exits from each room giving direct communication with the garden playground.

A branch public library is given accommodations in the room planned for the purpose, and situated in the front of the building at the east of the east entrance. The rear of the east wing of the building is occupied by the school for crippled children, including an occupational room, corrective room, rest-room, classrooms, lunch-room, and toilets. There are no stairways for these children to climb, easy ramps being designed to replace the stairs. The children up to seventy-five in number can be accommodated. They are brought in special conveyances from all parts of the city.

In addition to the provisions for instruction mentioned are the following: a large manual-training room, ample space for domestic-science instruction, with kitchenette adjoining, auxiliary rooms, ungraded room, coaching room; special accommodations for children with defective vision; an art room properly lighted, teachers' rest-rooms, store-rooms, the necessary classrooms for carrying on the usual and normal work of teaching children of this district.

Auditorium entrance.

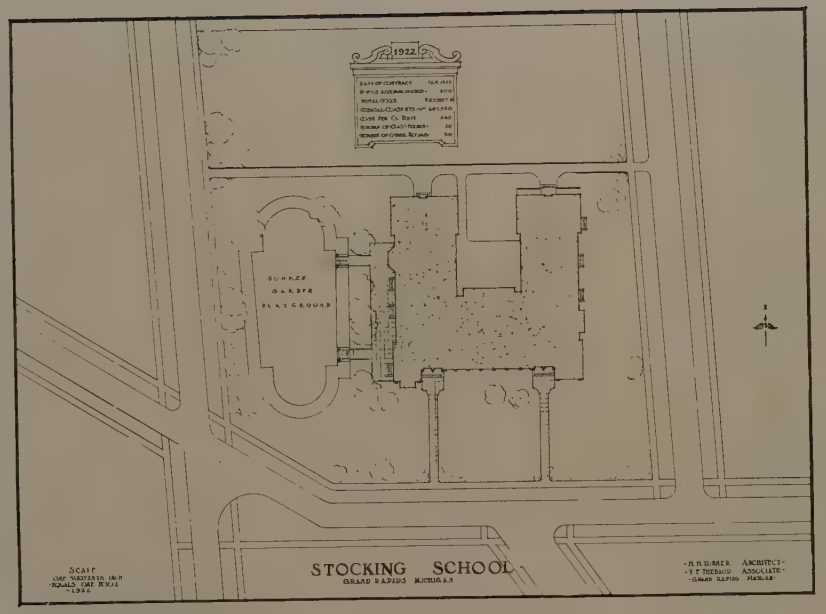
Space has been utilized to the utmost. The cost for occupancy was approximately $205,000.

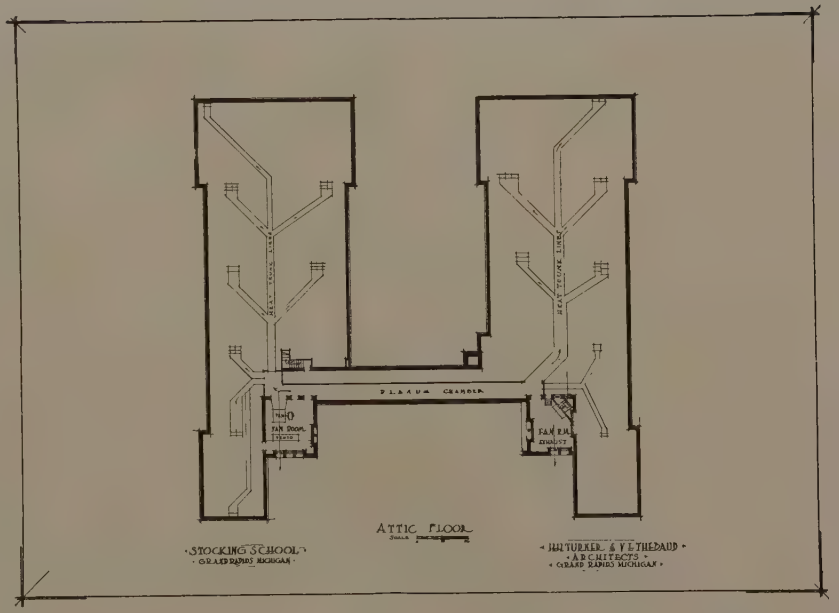
The construction of this building is practically fireproof. The walls are bearing walls, *i. e.*, the structure is not of skeleton frame. The floors are of reinforced concrete. The finished floors are maple in the classrooms and wood-working shops, battleship linoleum in the corridors and primary grade rooms. The woodwork, *i. e.*, trim about windows and doors, has been reduced to a minimum. Blackboards are secured to walls and grouted solid, eliminating a source of unpleasant noise.

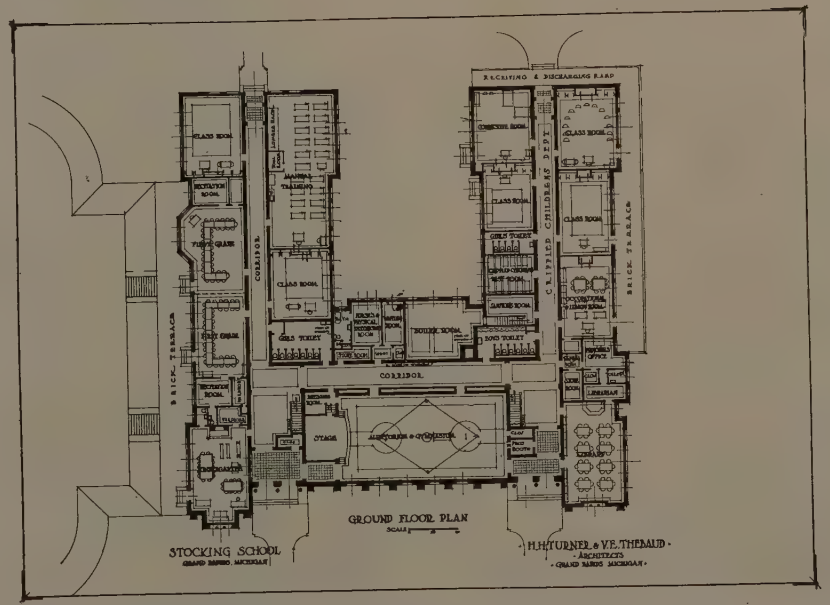
The exterior of the building expresses the use to which the building is put. Its architecture is informal, with details reminiscent of Italy and Spain. The roofs of the upper-story corridor and the towers are of clay tiles, laid as such roofs are laid in Italy. It is rich in harmonious color, contrasting agreeably with the yellowish-brown of the brick work below.

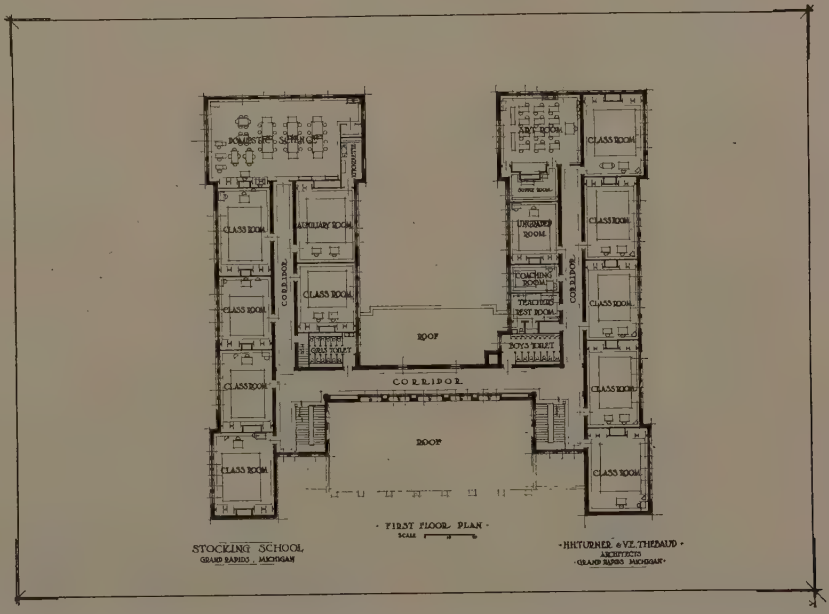
The full-grown trees on the site have been preserved, and add greatly to the attractiveness of a building designed as a distinct departure from the rigid and uninviting institutionalized school.

Library entrance.



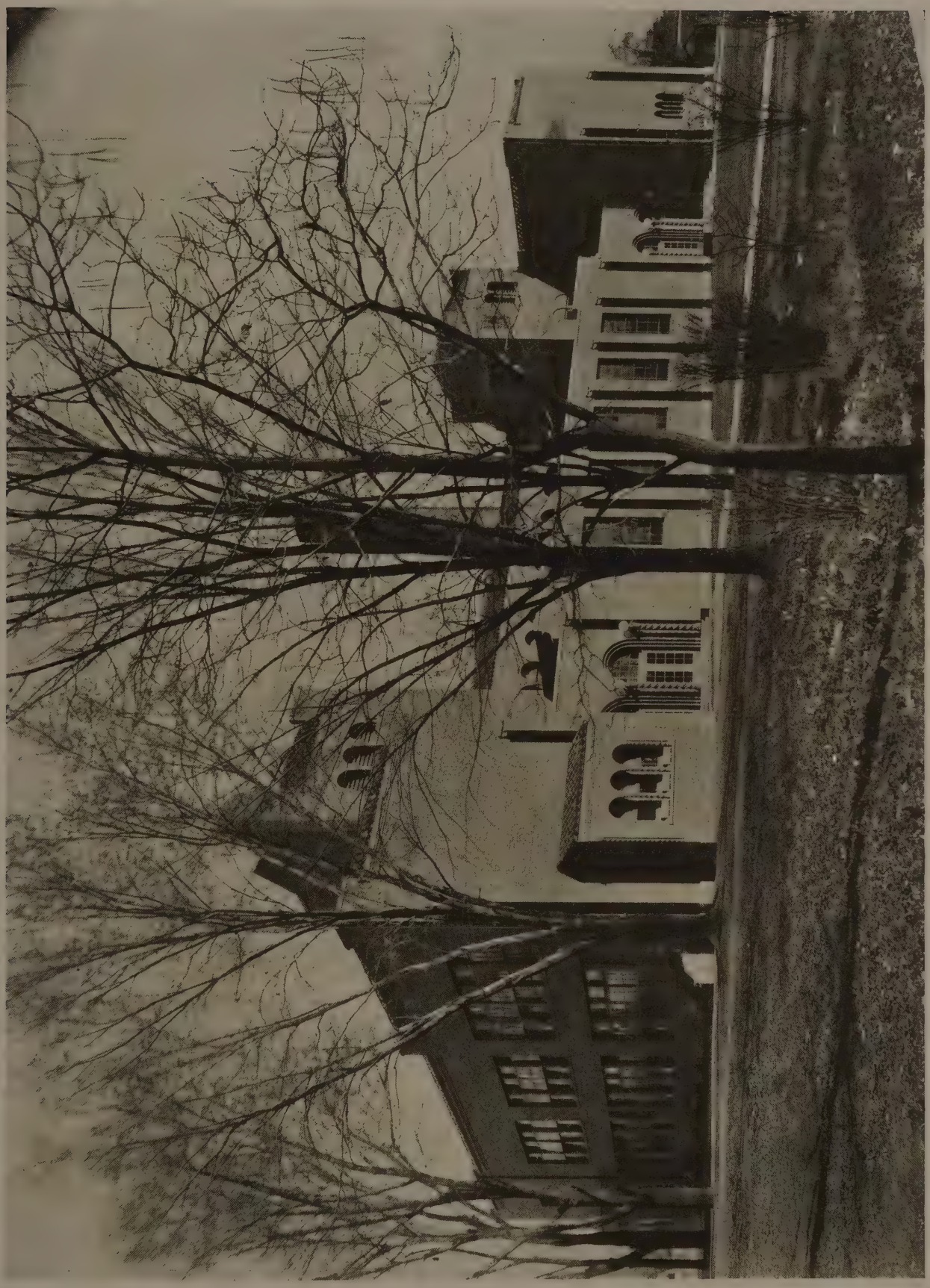






STOCKING SCHOOL, GRAND RAPIDS, MICH.

H. H. Turner and V. E. Thebaud, Architects.



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Announcements

University of Michigan to Have Building for Architectural School

THE legislature of the State of Michigan has just made an appropriation of $400,000 for the first unit of a building for the architectural school of the University of Michigan. This is probably the first time that a State legislature has made an appropriation for such a purpose.

Wins Booth Travelling Fellowship, College of Architecture, University of Michigan

THE George G. Booth Travelling Fellowship in Architecture has been awarded to Kenneth C. Black, of Lansing, Mich. Honorable mention was awarded to LeRoy E. Keifer, of Detroit, there being four other competitors. This is the second year that the fellowship has been awarded, which carries with it a stipend of $1,200. Mr. Kiefer, the runner-up, is to receive $150 given by the Detroit Chapter of the American Institute of Architects.

The jury consisted of the following architects: H. J. Maxwell Grylls, president, Detroit Chapter A. I. A.; William B. Stratton, past-president of the same Chapter; John B. Jewell, president of the Detroit Architectural Club; and Mr. Wirt Rowland of Smith, Hinchman & Grylls, Detroit; and five members of the architectural faculty.

In the opinion of the faculty, there is an improvement in the designs submitted by the competitors this year over those of last year, and this improvement it is hoped will go on from year to year.

The purpose of the scholarship is to further a higher standard of preparation for architectural practice, the stipend being based on the endowment of $20,000 given last year by Mr. George G. Booth, of Detroit. Mr. Booth has taken a fine constructive interest in the architectural school, and along with the architects of the State has done much to co-operate with the faculty in advancing the school's standards and interest.

Carnegie Summer Students Will Be in the Swim

RECREATION and entertainment of summer-school students of this year are receiving special attention from the authorities at the Carnegie Institute of Technology, an announcement indicates. One of the most important features of recreational facilities during the coming summer, it is pointed out, will be the opening of the swimming-pool of the new $400,000 gymnasium for the special use of the summer-session students.

The pool, said to be one of the largest in American colleges, measures 75 feet by 35 feet, and has a capacity of 130,000 gallons. It will be open from 11.30 until 6.45 Monday to Friday inclusive, and from 10 to 5 on Saturdays. A swimming instructor will be in attendance daily.

The tennis-courts on the Carnegie campus will also be available to summer students. In addition, a programme of social events is to be arranged to include lawn parties, musicales, receptions, boat rides, dances, popular lectures, and visits to many of the industrial plants and historical points of interest of the Pittsburgh district.

The New York Society of Architects

AT the New York Society of Architects annual dinner, in May, the following resolution was passed unanimously:

"The New York Society of Architects, believing that numerous small playgrounds should be built in the congested districts, convenient to the children, and preferably upon city-owned vacant lots or cheaply acquired property, it therefore reaffirms its opposition to the invasion of Central Park for any purpose other than that for which it was created, and hereby instructs its committee to co-operate with the other organizations interested in vigorously fighting any conversion of the city's beautiful breathing spots.

"Referring to the successful convention of the American Institute of Architects and the Architectural League and the exhibits of the Allied Arts, recently held in this city, which was generously placed at the disposition of all the architects, and which was indeed a wonderful contribution to the entire profession and the enlightenment of the age, and deserving of the sincere gratitude of all architects, therefore be it

"*Resolved*, That this society, assembled at its annual convention, extends its hearty congratulations to the officers and members of the American Institute of Architects and its chapters, the Architectural League, and the eminent architects and exhibitors who co-operated in the wonderful success of this greatest and most successful undertaking, and be it further

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A PORTFOLIO of special interest to all architects and artists has just been announced by Edward C. Bridgman, publisher, 240 West 40th Street, New York City. It consists of full-color reproductions, direct from twelve original paintings by Jules Guerin. The plates from which these reproductions have been printed were made by the Beck Engraving Company, of Philadelphia, Pa. The twelve subjects are folioed in a buckram binding, 13⅜ inches wide by 18 inches high. The subjects rendered are as follows:

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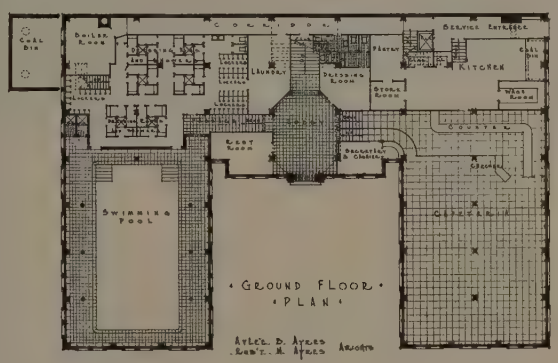

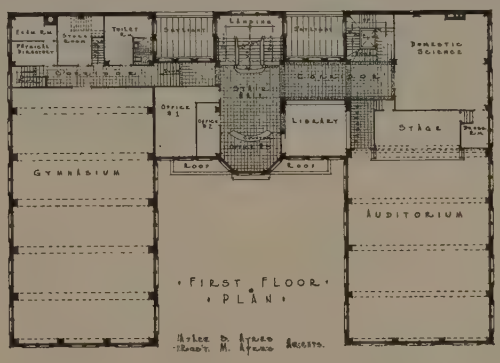

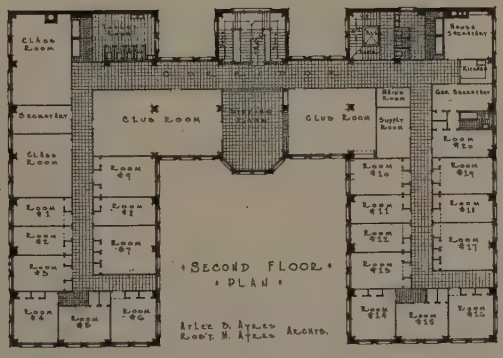

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YOUNG WOMEN'S CHRISTIAN ASS'N.
SAN ANTONIO, TEXAS

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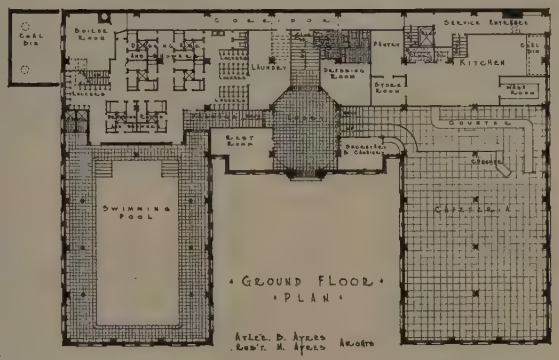

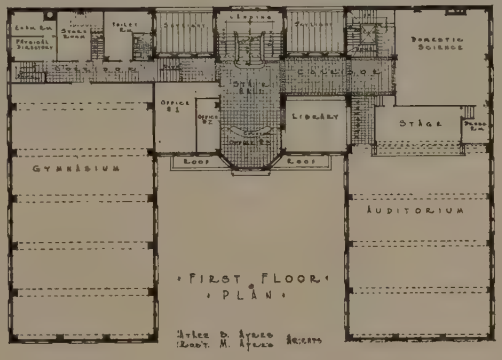

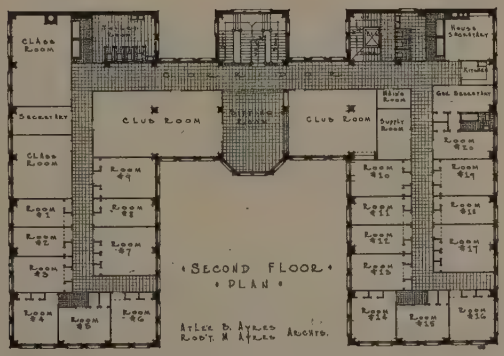

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Announcements

Messrs. Charles J. Calrow, R. Maury Browne, and T. David Fitz-Gibbon announce the formation of a partnership for the practice of architecture, under the firm name of Calrow, Browne & Fitz-Gibbon, with offices in the New Monroe Building, Norfolk, Va.

Henry J. Moloney, R. A., wishes to announce that his executive office will be located in the Canadian Pacific Building, 342 Madison Avenue, New York, Suite 804; telephone number, Murray Hill 9197. The studio will be located at 247 East 41st Street.

Munroe Walker Copper, Jr., architect, announces the removal of his office to 4500 Euclid Avenue, Cleveland, Ohio.

Tilden & Register, architects, announce that Mr. George Wharton Pepper, Jr., has become associated with them in the general practice of architecture at 1520 Locust Street, Philadelphia, Pa., from May 1, 1925.

Louis E. Korn, architect and engineer, announces the removal of offices from 988 Northwestern Avenue to 910 and 911 Financial Center Building, 7th and Spring Streets, Los Angeles, Calif. Manufacturers' literature, catalogues, and samples desired.

Roswell E. Pfohl and Thomas S. McLaughlin announce the establishment of the firm of Pfohl & McLaughlin, Inc., architects and engineers, at 830 Walbridge Building, Buffalo, N. Y. Mr. Pfohl is a graduate of the Massachusetts Institute of Technology, and was formerly chief engineer for Moran, Maurice & Proctor, consulting engineers, New York City. Mr. McLaughlin pursued a special course of study in architecture at the Massachusetts Institute of Technology, and has for the past nine years conducted the practice of architecture in his own office at Providence, R. I. Mr. McLaughlin is a member of the American Institute of Architects. Manufacturers are requested to send catalogues and samples.

Janssen & Cocken, architects, Century Building, Pittsburgh, Pa. In announcing the expansion of his architectural offices and the changing of the firm name, Mr. Benno Janssen wishes to express his great appreciation to friends and clients for their help and support and to the contractors and the entire office personnel for their loyal service. The members of the firm are: Benno Janssen, W. Y. Cocken, Jr., R. L. Hoffman, A. R. Robinson, T. R. Critchlow, K. R. Crumpton, E. J. Hergenroeder; C. O. Gilbert, structural engineer; A. McGonagle, mechanical engineer.

On and after June 1, 1925, Bley & Lyman, architects, will be located in their own building at 505 Delaware Avenue, Buffalo, N. Y.

Harold E. Paddon and Alexander T. Saxe, associate architects, announce the opening of their office at 1350 Broadway, New York City, and will continue the practice of architecture under the firm name of Paddon & Saxe, Inc.

Clare C. Hosmer, 415 First Bank and Trust Building, Sarasota, Fla., who is a member of the American Institute of Architects, Illinois Society of Architects, and Florida Association of Architects, and was managing director of the 1923–1924 Chicago Architectural Exhibition, would like to have catalogues and samples.

Book Reviews

HOUSES AND GARDENS. By Sir Edwin Landseer Lutyens, R. A. Described and criticised by Sir Lawrence Weaver, K. B. E., F. S. A. Hon. A. R. I. B. A. Charles Scribner's Sons, New York.

This new printing of the larger work dealing with the architecture of Sir Edward Landseer Lutyens, who was recently in this country and honored with the gold medal of the American Institute of Architects, will be welcomed by many who have been unable to obtain it in recent years. The book covers twenty-one years of work and reveals the versatility and extensive practice of the foremost English architect of to-day. No one could possibly mistake any of the work shown for anything else than English. While the traditional note is evident there are yet shown originality and adaptability and a fine sense of the charm obtainable in the use of varied materials. Sir Edwin's fame has been largely associated with his residential work, both large and small, but he is also known as the architect of important public buildings, and is now engaged on the great project of The Imperial City of Delhi, India.

Included in the 580 illustrations are designs for furniture, and the appendix includes a number of scale drawings of details. There is a certain substantial quality about the work shown in this handsome volume that is in keeping with the English character. Among the houses shown here none are more appealing in their domesticity and charm than some of the smaller ones, several the result of various additions and alterations. It is by his residential work and beautiful gardens that Sir Edwin is best known.

Sir Edwin has been a very busy man evidently, and has accomplished a surprising amount of work. He is especially happy in his gardens, and we are told in the preface that he had the good fortune to be early associated with Miss Jekyll, whose garden books are known to most of our readers.

MASTERS OF ARCHITECTURE—SIR JOHN SOANE. By H. J. Bernstingl. With 35 Illustrations from Photographs by F. R. Yerbury. 4to. Charles Scribner's Sons, New York.

Nearly every visitor to London knows the Soane Museum at 13 Lincoln's Inn Fields, but few probably know that the house was built as a residence by the man whose name it bears. Sir John became one of England's famous architects, though beginning life as the son of a master bricklayer. His fame is associated particularly with the great Bank of England, typical in its details of the architect's training and taste. When Sir John came to London in 1768, Robert Adam was in his prime and the fame of the Adam Brothers supreme. Sir John was articled to George Dance, R. A., and in 1776 he won the Royal Academy Gold Medal for his design for a triumphal bridge. The bridge was a dream never realized. It won the attention of Sir William Chambers, who introduced him to the king. This resulted in a pension that enabled him to study in Rome. Sir John was a leader in the classical revival, and there is little doubt that he was greatly influenced by the remarkable drawings by Piranesi. Sir John built himself a country home, Pitzhanger Manor, Ealing, now the Public Library, that showed the classical influence and embodied his own special ideas in the use of the orders and ornaments. The author places Sir John as the first really modern English architect. He had the modern capacity for adaptability.

THE PRINCIPLES OF DECORATION. By R. G. Hatton, author of "Figure Drawing," "Figure Composition," "Design," etc. Charles Scribner's Sons, New York.

The many illustrations from drawings in this book offer in themselves a multitude of suggestions. The text might be called a discussion of the metaphysical elements of design in general. The various chapters, beginning with "The Purpose of Decoration," and ending with "Social Considerations"—"Taste, after all, is social. It has something to do with good manners, with sound judgment and wise decision rendered with a sense of educated opinion in mind"—are full of pertinent, not to say original, ideas.

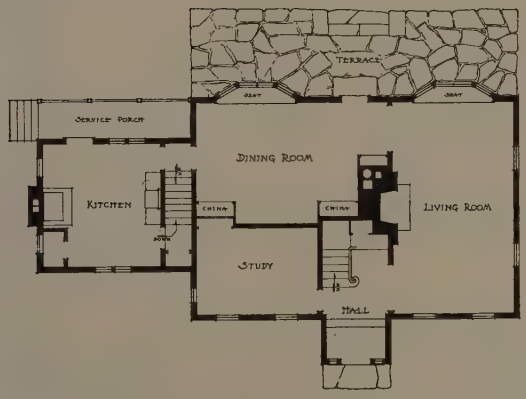
In the chapter on "The Assertion of the Idea—The Substitution," there is this text for these modern times:

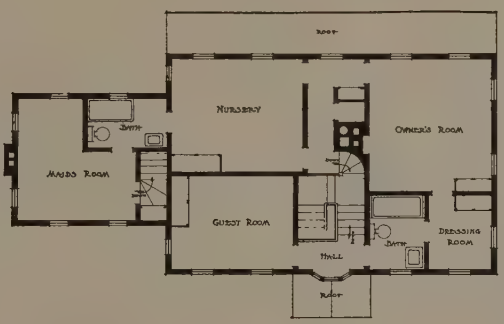
"Hence it may be claimed that, in art, the idea is superior to the processes and substances which express it.

"We have in 'jazz' a crude statement of this principle. 'Jazz' is naughty; a kind of doing what one has been told not to do. It is a coarse demonstration of feeling alive, and to feel alive is to have a sense of freedom from restraint and constraint. Hence it means a denial of law, method, and purpose. It is a refusal to take the economics of life seriously. 'Jazz,' however, like all artistic expression, is not as naughty as it looks. A 'jazz' pattern which denies unity entirely is intolerable, and it is not without significance that 'jazz' music is closely associated with dancing, which is necessarily unified by rhythm of some sort. In pattern-making 'jazz' pushes the denial of the logic of the object to the extreme."

TERRA COTTA OF THE RENAISSANCE. The National Terra Cotta Society, New York.

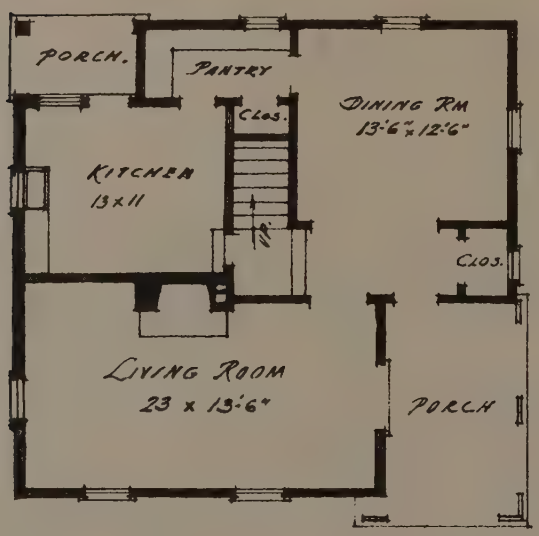
The material gathered in this attractively printed book represents the work of Mr. Arthur Frederick Adams, A.I.A., who was commissioned to travel in "the highways and byways" of Italy for the purpose of collecting photographs of well-known buildings, and of many off the beaten paths and unfamiliar to the usual student and traveller. The illustrations present a valuable and useful survey of the best work of the Italian Renaissance, easily adapted to modern uses.



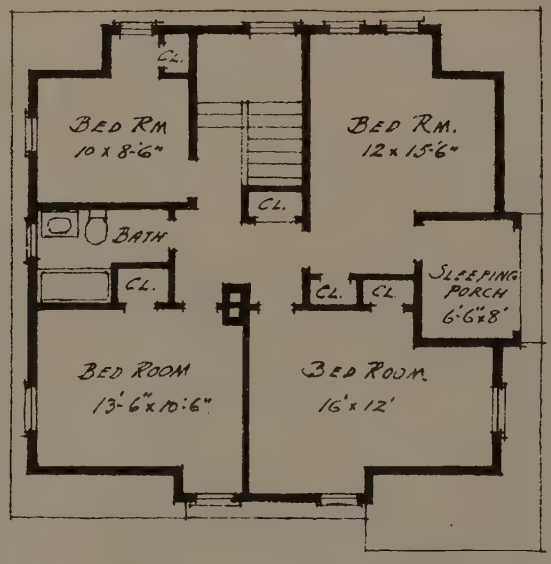


HOUSE, D. L. GILL, SOUND BEACH, CONN.

D. L. Gill, Architect.



FIRST FLOOR



SECOND FLOOR

HOUSE, H. D. WINANS, NEW ROCHELLE, N. Y.

J. H. Phillips, Architect.

An Architect's Simple Engineering Problems

By DeWitt Clinton Pond, M.A.

NINTH ARTICLE

THIS article will have as its general subject the various types of floor construction, some of which have been referred to in previous articles and others that have not been mentioned. Such engineering work encountered in the design of the floors will be touched upon only in a very general manner, as certain calculations would be very complicated if gone into thoroughly.

All floors are either fireproof or non-fireproof, and the latter term is almost synonymous with wood construction. The advantage of non-fireproof floors lies in the low first cost of installation and this is of no small importance. When wood was available in practically every section of the country the cheapness of floors constructed of wood joists, on which double flooring was secured and in the bottom of which it was possible to lath and plaster, was very considerable as compared with the costs of other types of construction work.

Such conditions do not prevail to-day, however. In some cases wood has to be transported almost across the continent and this does not add to its cheapness. But in spite of this handicap the difference in cost is so great between fireproof and non-fireproof floors that the number of residences that have fireproof floors is practically negligible, and it is largely due to the force of the law that floors in other types of buildings are fireproof.

Cheapness of first cost, however, is not an altogether satisfactory criterion. There is always the menace of fire where wood is used, there are certain numbers of cases where dry rot has resulted in the need of very expensive reconstructive work and shrinkage and wear account for expense in up-keep that is not required when floors of more permanent kinds of construction are used. And it must be borne in mind that wood construction is becoming more expensive as the supply becomes smaller, and distances from city to forests grow greater.

With regard to the design of wood floors there is practically no engineering skill required whatever. There are handbooks in which there are tables of maximum spans for various sizes of joists spaced 12 or 16 inches on centres. By referring to such a table in "Kidder's" it can be seen that a floor for a dwelling in which spruce joists are used can be constructed on 2-inch by 10-inch joists spaced 16 inches on centres provided the span is not more than 15 feet 9 inches, or if the joists are spaced 12 inches on centres the span can be increased to 17 feet 5 inches. The above facts were obtained from table VI—"Maximum Span for Floor-Joists," under the general heading of "Wooden Floors" in the handbook.

Of course, there are cases when the span is greater than 17 feet and 5 inches, but such cases are not often encountered and spans can be reduced by the introduction of supports in the form of girders carried on posts, piers, or columns.

In case it were necessary to span a distance as great as 20 feet, then the size of joists can be determined on the basis of the engineering formulas given in previous articles. Incidentally, if it became necessary to figure the sizes of wood beams, tables will be found in both "Kidder's" and the "Pocket Companion" that give the safe loads in wood beams, 1-inch wide for various spans. Tables of this type are similar to those used for finding the safe loads on steel beams, so there should be no difficulty in determining the size of wood members in non-fireproof floor construction.

With the increased cost of non-fireproof floors and the requirements of building laws that buildings in the cities shall be as completely fireproof as practical, there has come into existence a number of types of floors that are completely fireproof, and these types vary widely although the fundamental principles on which they are developed are about the same in all cases.

Originally the fireproof floor was built of steel beams with masonry arches spanning between them. Such masonry arches were first built of brick; then terra-cotta blocks laid in the form of sigmental or flat arches, and now almost universally the distance between the beams is spanned by reinforced concrete slabs, designed as stated in previous articles. Now there is nothing complicated with regard to the design of either the slab or the steel beams and should it be desirable to use a terra-cotta arch, the size and weights, carrying capacity and allowable spans can be found in the catalogues of the manufacturers of structural terra-cotta.

At the same time that the floor of steel beams and concrete slabs was being developed the floor of reinforced concrete was becoming a more and more recognized standard form of construction. Floors of this type were used in buildings where the entire construction was of reinforced concrete, and where the beams and girders as well as the slabs were of this material. There is nothing different about the design of this floor construction from the methods outlined in other articles, but there is a type of concrete floor that has been adopted which requires a special type of design. This is known as "flat slab" construction.

Nothing has been given in the previous articles with regard to this kind of floor, but it has many advantages, as well as one very distinct disadvantage. From an architectural point of view it is far from beautiful, as the columns have large flaring caps at the top that are difficult to treat from the standpoint of decoration.

The flat slab floor, however, without beams or girders, offers the great advantage of a thin floor. In these days when cities are adopting zoning laws which limit the height and bulk of buildings this is of no small importance. The distance from floor to floor in buildings where flat slabs are used may be over a foot less than where beams and girders are installed. This difference in ten or twelve stories will add another floor in a building.

The large cap at the top of the columns is for the purpose of spreading the bearing of the floor over such a large area that there will be no danger of shearing or punching at the column heads. It is the same problem as that of a spread footing, only it is reversed. The cap may be looked upon as a footing which is upside down. It must be remembered that the slab is only 7 or 8 inches thick for spans of 20 feet, and live loads of 150 pounds per square foot.

Flat slabs are reinforced by two different methods. There are the two-way and four-way systems of reinforcing. These methods or systems are thoroughly described in the

building codes of the various cities where flat slab reinforced concrete construction is allowed. Columns are spaced in square or nearly square panels and in both systems of reinforcement bands, similar to very flat beams, span from column to column. In the two-way system there is a suspended panel between the bands in which the reinforcement spans in both directions from band to band. In the four-way system the bands are not only placed along the centre lines of the columns but run diagonally across the panels so that there is no suspended panel in the centre. Theoretically this is the better system of reinforcement as all loads are carried back to the columns, but on account of the mass of steel that crosses the column heads in four different directions there are certain practical objections to the placing of the steel.

No attempt will be made to explain how the various slab thicknesses and steel reinforcement areas are determined, as the calculations are somewhat complicated and no architect who has not had some experience in engineering work should attempt to design floors of this type, but it is a very useful thing to know that there are thin floors of this type which can be used in buildings where interior architectural treatment is of no great importance, and where the greatest amount of floor area is required in a given building.

Both beam and girder and flat slab construction are typical reinforced concrete designs and steel beams with concrete slabs spanning between are typical of steel skeleton construction but there are types of buildings in which other types of fireproof floors are almost entirely used. These types include the medium-sized fireproof buildings such as schools, Y. M. C. A. structures, and other similar semipublic edifices. Here the floors are not generally supported in columns and girders except in somewhat rare cases but span from wall to wall, and thin floors without exposed deep beams are very much better as they reduce the height of the entire structure and make greater flexibility in planning possible.

For this kind of floor there are a number of types of construction some of which have been used for years and have become standard floors, and others which are new and more or less experimental.

In a general way all of these floors are simply varied forms of concrete floor construction and all depend upon concrete as the structural material. The only difference between this type of flooring and the ordinary beam and girder floor is that the beams are spaced only 24 or 25 inches on centres so that the span between them is not great, the load on each beam correspondingly small and, therefore, for spans as great as 30 feet it is possible to have the floor construction not more than 15 inches thick and a total thickness of floor, including finish and plaster, of about 18 inches.

Now the method of constructing such a floor depends upon the system that is employed. In some cases terra-cotta, or cement or gypsum blocks are placed on wood strips, used as forms, so that spaces are left between the tiles making forms for the beams and in which the reinforcing rods are placed. The blocks are left in the floor after it is poured so that a flat ceiling is secured upon which plaster may be applied.

If such blocks are not used there are other floor systems in which metal floor tile take the place of such blocks and metal lath is secured to the floor beams so that the ceiling is a flat plastered ceiling and the beams are concealed.

In order to find the depth of such floors it is only necessary to refer to the catalogues of the various manufacturers of floor tiles—no matter whether they are of metal, gypsum, terra-cotta or cement. Tables are given in which the spacing of the tiles is listed, the span in feet, the depth of the tile, the area of the reinforcing bars and the safe live load per square foot. There is no need of more engineering knowledge than the reader already possesses in order to select the various elements that make up such a floor, but caution should be used if the span is a simple span between two supports as most tables of this kind are developed for continuous beams. From the information given in previous articles it should not be difficult for the reader to make any required corrections for semicontinuous or simple spans, especially as the formulas used in the development of such tables are all given in the explanation that is attached to them.

One might assume that this type of floor is used only where wall beaming structures are designed, but in fact this kind of floor construction is often used where the building is of reinforced concrete and where this floor construction spans from girder to girder.

There are, of course, many other types of fireproof floors and some of these are becoming standard types of construction, but none of them have been used to the extent that those mentioned in this article have been utilized. There is still a chance, however, for some one to develop a fireproof floor that can be used in residential work and which will not be so much more expensive than wood as to make the builder or owner discard it without trial.

New York's Fine Arts Federation

THE annual meeting of the Fine Arts Federation of the City of New York was held recently at the Fine Arts Building, 215 West 57th Street, New York City.

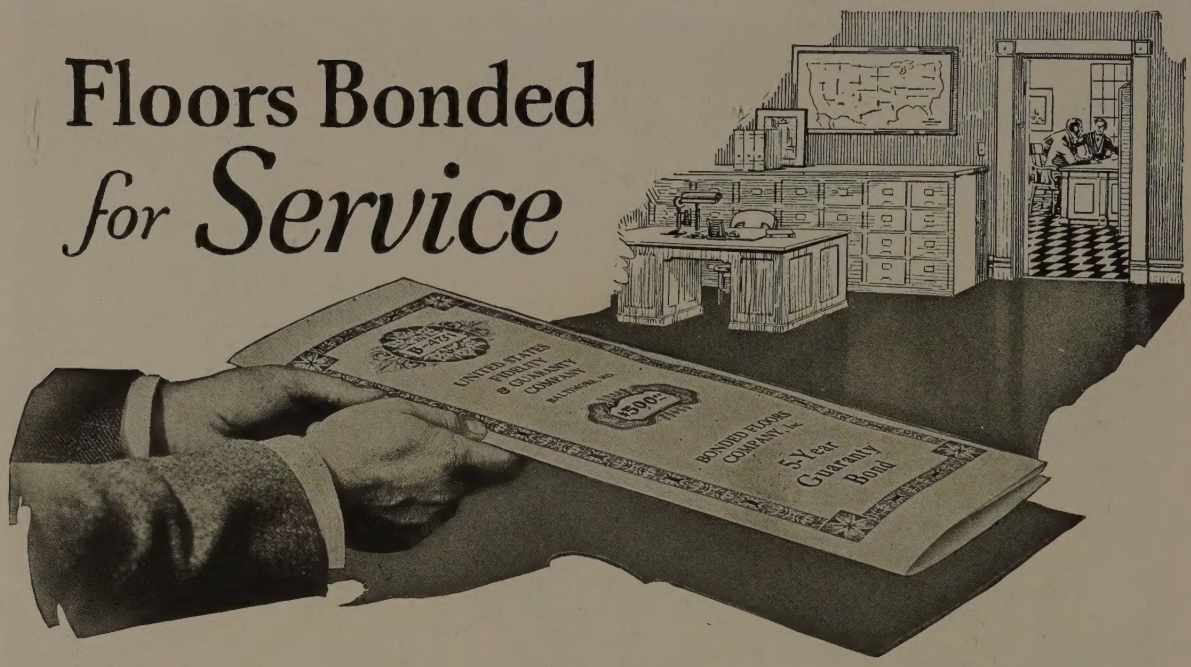
The following officers were elected: *President*, Joseph H. Freedlander; *Vice-President*, Robert Aitken; *Secretary*, John V. Van Pelt; *Treasurer*, Albert S. Bard; *Board of Directors:* The above officers and Harry Watrous, Albert J. Wilgus, and James L. Greenleaf.

The Fine Arts Federation is the parent society of the various artistic interests of the city and its constituent societies, each represented by delegates, are the following: The National Academy of Design; New York Chapter of the American Institute of Architects; The American Water Color Society; The Society of American Artists; The Architectural League of New York; The American Fine Arts Society; The Municipal Art Society of New York; The Society of Beaux Arts Architects; The National Sculpture Society; The National Society of Mural Painters; New York Water Color Club; Brooklyn Chapter of the American Institute of Architects; Society of Illustrators; American Group Société des Architectes Diplomés par le Gouvernement; The Art Commission Associates; The New York Chapter American Society of Landscape Architects.

One of the functions of the Fine Arts Federation is the recommendation to the governor of a painter, a sculptor, and an architect for appointment on the New York State Fine Arts Commission, and in a similar manner a recommendation to the mayor for appointment on the Municipal Arts Commission.

FROM A DRAWING BY H. NOLAN.

Floors Bonded *for* Service



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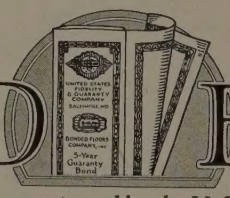

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THE TOWER IN ANDUJAR, SPAIN.

From the lithograph by Samuel Chamberlain.